

*Lymph Notes*

*in Pediatrics*

## *Index*

Growth & Development.....	2
Nutrition.....	11
Genetics.....	26
Infections & vaccination.....	32
Emergency .....	40
Neonatology.....	52
Cardiology.....	63
Haematology.....	77
Respiration .....	96
GIT .....	111
Hepatology.....	126
Nephrology.....	137
Neurology.....	142
Allergy .....	150
Rheumatology.....	152
Endocrine.....	153
Problem solving Paediatrics round – 2017/2018.....	159
Final exam – May 2018.....	165

# Growth & Development

---

## MCQ:

---

**1. Choose the correct answer about infant weight:**

- a. Weight is doubled at 4 months and tripled at 12 months.
- b. Weight is doubled at 3 months and tripled at 12 months.
- c. Weight is doubled at 6 months and tripled at 15 months.
- d. Weight is doubled at 4 months and tripled at 15 months.

Answer: a.

**2. A 12-year-old boy is evaluated for short stature. He has no significant past medical history and is considered otherwise healthy by his parents. He eats a normal diet and has regular meals. His height & weight have been consistently at the 5<sup>th</sup> percentile since early childhood. His physical examination is normal.**

**I. The most likely diagnosis is:**

- a. Familial short stature.
- b. Constitutional delay of growth.
- c. Under-nutrition.
- d. Hypothyroidism.

Answer: a.

**II. Expected finding in this child includes:**

- a. Delayed puberty.
- b. Short parents.
- c. Normal final adult height.
- d. Delayed bone age.

Answer: b.

**3. The causes of short stature include the following, except:**

- a. Turner syndrome.
- b. 47 XXY males.
- c. Celiac disease.
- d. Hypothyroidism.

Answer: b.

**4. The healthy infant usually doubles his birth weight at the age of:**

- a. 4 weeks.
- b. 2 months.
- c. 4 months.
- d. 6 months.

Answer: c.

**5. The healthy infant usually triples his birth weight at the age of:**

- a. 4 months.
- b. 6 months.

- c. 8 months.
- d. 12 months.

Answer: d.

**6. The age of eruption of the permanent 1<sup>st</sup> premolars is usually:**

- a. 6-7 years.
- b. 8-9 years.
- c. 10-12 years.
- d. 15-17 years.

Answer: c.

**7. The ratio of the upper segment to the lower segment of a 3-year-old child is:**

- a. 1.7
- b. 1.5
- c. 1.3
- d. 1

Answer: c.

**8. Between 8 & 12 months of age, the weight gain of the healthy infant is about:**

- a. 250 gm per month.
- b. 450 gm per month.
- c. 650 gm per month.
- d. 750 gm per month.

Answer: a.

**9. The ratio of upper segment to lower segment at birth is:**

- a. 1.7
- b. 1.5
- c. 1.3
- d. 1.0

Answer: a.

**10. The average head circumference at the age of 1 year is:**

- a. 35 cm.
- b. 47 cm.
- c. 50 cm.
- d. 53 cm.

Answer: b.

**11. Which of the following is not correct about familial short stature:**

- a. The child is short & healthy.
- b. Have short parents.
- c. Have reduced growth velocity.
- d. The final adult height is short.

Answer: c.

**12. In percentile growth curves, measurement persistently below 3% is suggestive of:**

- a. Malnutrition.
- b. Endocrinal disease.
- c. Chronic infection.



- d. All of the above.

Answer: d.

**13. All of the following are true about microcephaly, except:**

- a. It maybe primary or secondary.
- b. Congenital cytomegalovirus infection maybe a cause.
- c. It's always associated with motor deficit.
- d. Hypoxic ischemic brain damage maybe a cause.

Answer: c.

**14. The most commonly used growth curve in children, although it's not the most accurate, is:**

- a. Velocity growth curves.
- b. Distance growth curves.
- c. Percentile growth curves.
- d. Standard growth curves.

Answer: c.

**15. Which of the following is true about craniosynostosis:**

- a. Mental function is commonly affected.
- b. Skull is deformed.
- c. Child has urinary incontinence.
- d. Always associated with convulsions.

Answer: b.

**16. Which of the following is correct about microcephaly:**

- a. It's defined as skull circumference below 50<sup>th</sup> percentile for age.
- b. It's always associated with motor defect.
- c. It may be caused by congenital infections.
- d. Aqueduct stenosis maybe a cause.

Answer: c.

**17. Causes of short stature include all except:**

- a. Chronic hemolytic anemia.
- b. Klinefelter syndrome.
- c. Acquired hypothyroidism.
- d. Long-term steroid therapy.

Answer: b.

**18. At birth, normal heart rate is:**

- a. 60-80 per minute.
- b. 70-120 per minute.
- c. 80-110 per minute.
- d. 110-150 per minute.

Answer: d.

**19. During evaluation of a 5-year-old boy, his height is just below 5<sup>th</sup> percentile. The parents brought his previous growth curves, which reveal that since early infancy, his length/height has followed a curve parallel to, but just below, the 5<sup>th</sup> percentile. His mother's height is 152 cm and his father's height is 162 cm. History & physical examination are otherwise entirely normal. Bone age is normal. What is the most likely diagnosis?**

- a. Constitutional delay in growth.
- b. Growth hormone deficiency.
- c. Hypothyroidism.
- d. Familial short stature.

Answer: d.

**20. The upper segment to lower segment ratio in a child aged 8 years is expected to be:**

- a. 1.3
- b. 1
- c. 1.5
- d. 1.7

Answer: b.

**21. A weight measurement falling on the 10<sup>th</sup> percentile for a given age indicates that:**

- a. 10% of normal children of the same age will have the same height.
- b. The patient's weight is 10% below the mean value for the age.
- c. The patient's weight is 10% above the mean value for the age.
- d. 10% of normal children of the same age would have the same or smaller weight.

Answer: d.

**22. A possible cause of short stature is:**

- a. Congenital cyanotic heart disease.
- b. Infant of diabetic mother.
- c. Acute renal failure.
- d. Acute infection.

Answer: a.

**23. One of the following statements is true about short stature in children:**

- a. In most cases, it's a variant of normal.
- b. There is often early puberty.
- c. A history of preterm birth is irrelevant.
- d. Maybe caused by acute renal failure.

Answer: a.

**24. One of the following is correct about growth:**

- a. Growth is most rapid between 2 & 3 years of life.
- b. Commonest cause of failure to thrive in infancy is renal agenesis.
- c. Socioeconomic state may affect growth.
- d. Growth charts are same for both sexes.

Answer: c.

**25. One of the following is wrong about microcephaly:**

- a. It's defined as skull circumference below 3<sup>rd</sup> percentile for age.
- b. It may be associated with motor defect.

- c. It may be caused by congenital infection.
- d. Aqueduct stenosis maybe a cause.

Answer: d.

**26. The 1<sup>st</sup> deciduous tooth appears by:**

- a. 3-4 months.
- b. 4-5 months.
- c. 8-9 months.
- d. 5-7 months.

Answer: d.

**27. The faster weight gain is seen at:**

- a. 1<sup>st</sup> year & puberty.
- b. 2<sup>nd</sup> year & puberty.
- c. Puberty.
- d. Infancy.

Answer: a.

**28. The average monthly weight gain in the 1<sup>st</sup> 4 months:**

- a. 250 gm.
- b. 500 gm.
- c. 750 gm.
- d. 1000 gm.

Answer: c.

**29. In percentile growth curves, measurement below ... is considered below normal:**

- a. 50%.
- b. 25%.
- c. 7%.
- d. 3%.

Answer: d.

**30. Short stature maybe due to:**

- a. Malnutrition.
- b. Growth hormone deficiency.
- c. Diabetes mellitus.
- d. All of the above.

Answer: d.

**31. Birth length doubles at the age of:**

- a. 1 year.
- b. 2 years.
- c. 3 years.
- d. 4 years.

Answer: d.

**32. A 5-year old girl presents with short stature, she has always been short but this has become more apparent over the last year, her height is less than 5th percentile and her weight is in 10<sup>th</sup> percentile, she is asymptomatic and not dysmorphic, what would be the most useful investigation?**

- a. Thyroid function test.
- b. Karyotyping.
- c. Kidney function test.
- d. Full blood count.

Answer: b.

**33. A 7-year old boy presents to your clinic for evaluation of short stature. Parents report that he has always been the shortest boy in class. He has been well with no chronic medical problems. His height is below the 5<sup>th</sup> percentile with weight on 25<sup>th</sup> percentile. His mother is 145 cm. patient's father is 155cm. no family history of any medical problems. What is your diagnosis?**

- a. Hypothyroidism.
- b. Constitutional delay in growth.
- c. Familial short stature.
- d. Growth hormone deficiency.

Answer: c.

**34. A 7-year old boy presents to your clinic for evaluation of short stature. He has no history of any chronic symptoms. His height is below 5<sup>th</sup> percentile with weight on 10<sup>th</sup> percentile. He has no abnormal features. What to do first?**

- a. Thyroid function test.
- b. GH assay.
- c. Serum protein & full blood count.
- d. Measure the height of mother and father.

Answer: d.

**35. This is a 12 -year- old boy who is seen by his physician for short stature, his past history is normal. No family history of short stature but he has older male sibling age 18 years with history of delayed onset of puberty. What is the most likely cause?**

- a. Hypothyroidism.
- b. Constitutional delay in growth and puberty.
- c. Familial short stature.
- d. GH deficiency.

Answer: b.

**36. A 5 -year- old boy presents with short stature. His height is less than 5<sup>th</sup> percentile. He is asymptomatic with normal features. His mid-parental predicted height percentile was 50<sup>th</sup>. Most useful investigation is?**

- a. GH assay.
- b. Karyotyping.
- c. Kidney function test.
- d. Skeletal survey.

Answer: a.

**37. A 4-year-old child with short stature, height below 5<sup>th</sup> percentile, upper segment to lower segment ratio is 1.5 \ 1. Helpful investigation will be?**

- a. Cranial CT.
- b. Endocrine testing for growth hormone levels and pituitary function.
- c. A skeletal survey.
- d. Examination of both parents.

Answer: c.

**38. A 13-year-old boy was reviewed at school for moderate learning difficulties. His height more than 95<sup>th</sup> percentile with weight at 50<sup>th</sup> percentile. He had bilateral testicular volumes of 2 ml and no pubic or axillary hair. His mid-parental predicted height percentile was 50<sup>th</sup>. What is the diagnosis?**

- a. Constitutional tall stature.
- b. Marfan syndrome.
- c. Down syndrome.
- d. Klinefelter syndrome.

Answer: d.

**39. The parents of a 14-year-old boy are concerned about his short stature and lack of sexual development. He had normal growth pattern, although he was always shorter than children of his age. Examination revealed height at 5<sup>th</sup> percentile, upper segment to lower segment ratio is 0.98. A small amount of axillary and pubic hair is present. What is the following action?**

- a. Measure pituitary gonadotropin.
- b. Obtain CT scan of pituitary gland.
- c. Measure serum testosterone.
- d. Reassure the parents.

Answer: d.

**40. An otherwise healthy 6-year-old child is brought to you to be evaluated because he is the shortest child in class. Careful measurement of his age. Which disorder is the cause?**

- a. Achondroplasia.
- b. Hypothyroidism.
- c. GH deficiency.
- d. Marfan syndrome.

Answer: c.

**41. Causes of microcephaly include all except:**

- a. Rubella
- b. Fanconi syndrome
- c. Turner syndrome
- d. Down syndrome

Answer: c.

**42. All are causes of microcephaly except:**

- a. Craniostenosis.
- b. Congenital infection.
- c. In-utero irradiation.

- d. Cerebral palsy.
- e. Hypothyroidism.

Answer: e.

**43. Which is a cause of macrocephaly:**

- a. Rickets
- b. Hemolytic anemia
- c. Hydrocephalus
- d. Brain tumor in an infant
- e. All of the above

Answer: e.

**44. All are true in constitutional growth delay except:**

- a. Normal hormonal level
- b. Ultimate height is normal
- c. Short stature since birth
- d. Bone age is significantly reduced

Answer: c.

**45. Premature fusion of skull bones is called:**

- a. Cranio-stenosis
- b. Microcephaly
- c. Hydrocephaly
- d. Macrocephaly

Answer: a.

**46. A 5 -year- old female child. Her weight is at 97<sup>th</sup> percentile for age and 5<sup>th</sup> percentile for height. Physical examination is otherwise normal. Which of the following statements best reflects the 1<sup>st</sup> management for this child?**

- a. No intervention is required at this time
- b. Subcutaneous skin fold thickness should be followed closely
- c. A dietary history should be elicited
- d. None of the above

Answer: c.

**47. About 1<sup>st</sup> teeth:**

- a. They are 32 in number.
- b. The average age of appearance of lower central incisors is 16-20 months.
- c. The average age of appearance of canines is 6-7 months.
- d. The average age of appearance of 1<sup>st</sup> molars is 10-16 months.

Answer: d.

**48. For developmental assessment, the limit age for transferring objects between hands is:**

- a. 6 months.
- b. 7 months.
- c. 8 months.
- d. 9 months.

Answer: b.

**49. An infant comes to well-baby health care visit. He sits with only minimal support, attempts to attain a toy beyond reach, laughs, rolls over, but does not have a pincer grasp.**

**I. What is the likely age of this infant?**

- a. 4 months.
- b. 6 months.
- c. 8 months.
- d. 10 months.

Answer: c.

**II. This infant can't:**

- a. Raise head from prone position.
- b. Smile responsively.
- c. Recognize mother.
- d. Creep or crawl.

Answer: d.

# Nutrition

---

## MCQ:

---

**1. The colostrum is characterized by: 2012**

- a. Lower PH than mature breast milk
- b. Protein content of about 3.5gm/100ml
- c. Fat content about 8gm/100ml
- d. Specific gravity 1040-1060

Answer: d

**2. To ensure successful breast feeding for the healthy newborn you need to encourage all of the following except: 2015**

- a. Rooming in
- b. Scheduled feeding
- c. Avoid the use of pacifiers
- d. Ensure perfect positioning of baby on the breast

Answer: b

**3. Compared to mature breast milk, colostrum has all of the following except: 2015**

- a. Higher specific gravity
- b. Higher protein content
- c. Higher fat content
- d. Higher mineral content

Answer: C

**4. Regarding composition of mature human breastmilk, which of the following is not correct: 2015**

- a. Water content is 87.5%
- b. Provide 67 calories per 100 ml
- c. Protein content is 3.5 gm/dl
- d. Carbohydrate content is 7gm/dl

Answer: C

**5. Lactose free formula is formula of choice in: 2016**

- a. Soy milk allergy
- b. Cow's milk allergy
- c. Galactosemia
- d. Phenylketonuria

Answer: C

**6. Which of the following is not true about human colostrum (2016)**

- a. Contains more fat when compared to mature milk
- b. Contains more proteins when compared to mature milk
- c. It is a thick yellow fluid
- d. Secreted during 1<sup>st</sup> 2-3 days after birth



Answer: A

**7. Regarding mature human milk, all of the following are true except:2016**

- a. Fat content is 3.5%
- b. Provides 87 calories per 100ml
- c. Its protein content is 1.2gm/dl
- d. Its carbohydrate content Is 7gm/dl

Answer: B

**8. which of the following is not true regarding composition of mature human breast milk: (2017)**

- a. proteins 1.2gm/dl
- b. calories 67 Kcal/100ml
- c. carbohydrates 3.5gm/100ml
- d. water content is 87.5%

Answer: C

**9. compared to human milk, cow's milk has higher: 2017**

- a. proteins
- b. calories
- c. water
- d. whey to casein ratio

Answer: a

**10. human colostrum, when compared to mature milk contains: 2017**

- a. more fat
- b. more Ig
- c. less proteins
- d. more lactose

Answer: B

**11. breast milk prevents intestinal infection by: June 2008**

- a. IgA
- b. Lactobacillus Bifidus
- c. Lactoferrin
- d. All of the above

Answer: D

**12. Colostrum is breast milk secreted in the 1<sup>st</sup> postnatal: Sep 2008**

- a. 2-3 days
- b. One week
- c. 3-5 days
- d. One month

Answer: A

**13. Which of the following Is true about breast milk: June, Sep 2009**

- a. Iron is low in breast milk
- b. Should be stopped during diarrhea
- c. Caloric content much higher than cow milk
- d. Poor in vitamin A

Answer: A

**14. Compared with cow's milk, human breast contains higher content of: June 2010**

- a. Na
- b. Protein
- c. Carbohydrates
- d. Calcium

Answer: C

**15. All of the following is true about mature breast milk, except: Sep 2010**

- a. Contain lactoferrin which increase iron bioavailability
- b. Best food for young infant up to 6 months
- c. Contain 57 Kcal/100ml
- d. Fat content is 3.5gm/dl

Answer: C

**16. One of the following is correct about fresh animal milk: Sep 2010**

- a. Best weaning food for infant starting from 6 months of age
- b. Lacks oligosaccharides
- c. Fat globules are smaller than human milk
- d. Sodium content less than human milk

Answer: B

**17. One of the following is true about human colostrum: June 2011**

- a. Mineral content is about 4gm/dl
- b. PH is acidic
- c. Content of protein ranges between 3-3.5gm%
- d. Has higher fat content than mature breast milk

Answer: A

**18. Compared to human milk, cow's milk usually has higher amount of: Sep 2011**

- a. Calories
- b. electrolyte
- c. water
- d. carbohydrates

Answer: B

**19. breast milk in first 3 days after delivery show all of the following except: (6<sup>th</sup> October uni)**

- a. called colostrum
- b. rich in proteins
- c. high Vit. K content
- d. high caloric value

Answer: D

**20. which of the following is not true about human colostrum?**

- a. It is a thick yellow fluid
- b. Secreted during 2-3 days after birth
- c. Contain more fat when compared to mature milk
- d. Contain more protein when compared to mature milk

Answer: C

**21. All of the following are true about clinical manifestations of kwashiorkor except:**

- a. The presence of edema.
- b. Rash is in the sun exposed areas.
- c. Hyperthermia.
- d. Weak muscles.
- e. An increased susceptibility to infection.

Answer: C

**22. All of the following are true about laboratory manifestations of kwashiorkor except:**

- a. Persistent ketonuria.
- b. Hypoalbuminemia.
- c. Hypoglycemia.
- d. Potassium deficiency.

Answer: A

**23. Features of marasmus include all except:**

- a. Hypothermia.
- b. Intolerance to lactose may occur.
- c. Convulsions with hypothermia.
- d. Caloric requirements are 150kcal/kg/day

Answer: C

**24. The clinical parameter most commonly affected in PEM is:**

- a. Height
- b. Weight
- c. Mid arm circumference
- d. Head circumference

Answer: B

**25. The fat which disappears last in PEM is:**

- a. Buttock fat
- b. fat in the back
- c. Buccal pad of fat
- d. Fat in the abdomen

Answer: C

**26. The early signs of recovery in PEM is:**

- a. Loss of edema
- b. Increased weight
- c. Increased appetite
- d. Increased muscle bulk

Answer: C

**27. The following is metabolic causes of death in infant with malnutrition except:**

- a. Hypoglycemia
- b. Hypocalcemia
- c. Hypothermia
- d. Hypomagnesaemia

Answer: d

**28. A 11 months old infant has eaten a diet with the following content and intake for the past 5 months: ptn 4%, CHO 56%, fat 40% of calories. 105 calories/kg/day. This patient will display symptoms consistent with which of the following:**

- a. Rickets
- b. Marasmus
- c. Obesity
- d. Kwashiorkor

Answer: D

**29. A 11 months old infant presenting with 1-day history of diarrhea he is on diet with the following content and intake for the past 4 months: ptn 15%, CHO 50%, fat 35% of calories with total calories of 75 kcal/kg/day.**

**Which one of the following findings you expect to find?**

- a. Hypovolemic shock because of diarrhea
- b. Loss of fat from abdominal wall and buttock
- c. Edema of dorsum of feet
- d. Increased muscle/fat ratio

Answer: B

Low caloric intake (Marasmus)

**30. A 9 months old infant presenting with lower limb edema has eaten a diet with the following content and intake for the past 5 months: ptn 5%, CHO 55%, fat 40% of calories.**

**100 kcal/kg/day. Which of the following investigations is correct?**

- a. Low serum protein, high serum sodium.
- b. Low serum protein, high serum potassium.
- c. High gamma globulins, low serum sodium.
- d. low alpha and beta globulins with high serum sodium.

Answer: C

**31. which of the following is considered as rachitogenic diet?**

- a. Prolonged breast milk without supplementation of vit D
- b. Cow s milk
- c. Cereals rich in phytates "phosphate"
- d. All of the above

Answer: D

**32. Regarding vit D deficiency rickets –all are true except:**

- a. Fe-deficiency anemia may be an under-secretion condition
- b. Bone fractures are possible complication
- c. Dentition is usually delayed
- d. Serum  $\text{Ca}^{++}$  is usually normal while serum phosphate is increased

Answer: D

**33. a false statement concerning vit D is:**

- a. It is fat soluble vitamin
- b. It is the only acquired from animal food

- c. The kidney is active in its metabolism
- d. Breast milk is poor source of vit D

Answer: B

**34. The normal daily requirement of vit D:**

- a. 100-400 IU/day
- b. 400-800 IU/day
- c. 800-1000 IU/day
- d. 4-1000-2000 IU/day

Answer: b

**35. In nutritional rickets:**

- a. Serum  $\text{Ca}^{++}$  is normal & phosphorus is low
- b. Serum  $\text{Ca}^{++}$  is low & phosphorus is normal
- c. Serum  $\text{Ca}^{++}$  is high & phosphorus is low
- d. Serum  $\text{Ca}^{++}$  is high & phosphorus is normal

Answer: a

**36. In vit D deficiency: serum  $\text{Ca}^{++}$  is maintained normal by:**

- a. + thyroid hormone secretion
- b. Decreased excretion of ph
- c. + parathyroid hormone secretion
- d. + calcitonin secretion

Answer: c

**37. latent tetany is normally observed when serum  $\text{ca}^{++}$  is:**

- a. more than 11mg/dl
- b. less than 7mg/dl
- c. 4-11 mg/dl
- d. 7-9 mg/dl

Answer: d

**38. Tetany is excepted to occur in:**

- a. Excessive vomiting
- b. Hypomagnesemia
- c. As a complication of shock vit D therapy in rickets
- d. All of the above

Answer: d

**39. in nutritional rickets: the following findings are correct except:**

- a. Serum calcium is 10mg/dl
- b. Broad epiphysis
- c. Serum phosphorus is 5-6 mg /dl
- d. Rosary beads

Answer: c

**40. About vit D: which of the following is not true**

- a. It can be synthesized inside the body
- b. The kidney has a role in its metabolism
- c. It requires bile for absorption in the GIT

- d. Cereal diet contains adequate amount of vit D

Answer: d

**41. In renal osteodystrophy (renal glomerular rickets) there is:**

- a. Resistance to therapy with vit D
- b. ↑ serum phosphate
- c. Metabolic acidosis
- d. All of the above

Answer: d

**42. The following deformities may occur in rickets Except:**

- a. genu verum
- b. cabbitus vulgum
- c. Harrison sulcus
- d. genu valgum

Answer: b

**43. Regarding vit D deficiency rickets, which is true?**

- a. rosary beads one late sign
- b. alkaline phosphate enzyme is normal
- c. urinary phosphorus is +
- d.  $\text{Ca}^{++}$  level is maintained in the normal range by 2ry hypothyroidism

Answer: c

**44. Regarding clinical manifestations of rickets, the following is correct, EXCEPT:**

- a. bow legs
- b. loss of skin elasticity
- c. frontal bossing
- d. delayed dentition

Answer: b

**45. Delayed eruption of teeth does not occur with**

- a. Rickets
- b. Oral moniliasis
- c. Cretinism
- d. Mongolism

Answer: b

**46. In vit D deficiency rickets, one statement is true:**

- a. Craniotabes is a late sign.
- b. Hypercalcemia occurs early appearance of clinic manifestation.
- c. Alkaline phosphatase level is reduced
- d. Serum phosphorus is low

Answer: d

**47. About nutritional rickets, which of the following is true?**

- a. Plasma alkaline phosphatase is low reflecting poor bone growth.
- b. Plasma of  $\text{Ca}^{++}$  absorption from GIT results in decreased parathyroid hormone level
- c. Full anti-racketic activity of vit D is dependent on normal adrenal function
- d. 25 hydroxylation of vit D occur in the liver

Answer: d

**48. Hypervitaminosis D is characterized by all Except;**

- a. Metastatic calcification
- b. Generalized hypotension
- c. X ray may show renal stone
- d. + urine calcium

Answer: b

**49. Symptoms of hypervitaminosis D include all Except:**

- a. Polydipsia polyuria
- b. Metastatic calcification
- c. Irritability
- d. Hypocalcemia

Answer: d

**50. Manifestation of hypervitaminosis D include:**

- a. Anorexia, vomiting, constipation
- b. Metastatic calcification
- c. Polyuria
- d. All of the above

Answer: d

**51. Which of the following is not suitable to confirm diagnosis of rickets?**

- a. Serum alkaline phosphatase activity
- b. An X-ray picture of the wrist
- c. The serum 25 hydroxycholecalciferol level
- d. The serum  $\text{Ca}^{++}$  level

Answer: c

**52. Possible cause for development of rickets in a child on oral vit D supplementation include all Except:**

- a. Defective metabolism of vit D in the skin
- b. Defective metabolism of vit D in the kidney
- c. Lipid malabsorption
- d. Hyperphosphatemia

Answer: a

**53. kwashiorkor is characterized by the following, EXCEPT:**

- a. Marked muscle atrophy
- b. Fatty infiltrative of the liver
- c. Lactose intolerance
- d. Skin manifestations in the form of dermatitis & hypopigmentation
- e. Incurrent infection as GE, viral hepatitis.

Answer: e

**54. All of the following cause tetany, Except:**

- a. Excessive vomiting
- b. Hypomagnesemia
- c. As a complication of shock therapy in rickets

- d. Hyponatremia

Answer: d

**55. Manifestation of hypervitaminosis D include all, Except:**

- a. Anorexia vomiting, constipation
- b. Metastatic calcification
- c. Polyuria, polydipsia
- d. Constipation or diarrhea

Answer: d

**56. What is the Radiological sign of healing rickets?**

- a. Zone of provisional calcification
- b. Calcification of metaphysis
- c. Calcification of epiphysis
- d. Union with shaft

Answer: a

**57. Investigation required for diagnosis of rickets include all Except;**

- a. Serum  $\text{Ca}^{++}$
- b. Phosphorous
- c. Alkaline phosphate
- d. Serum magnesium

Answer: d

**58. Complication of rickets include the following Except**

- a. Iron deficiency anemia
- b. Tetany
- c. Respiratory infection
- d. Pathological fracture

Answer: a

**59. Permanent sequence of the rickets includes the following Except**

- a. Harrison sulcus
- b. Bony deformation
- c. Contracted pelvis
- d. Craniotabes

Answer: d

**60. Symptoms of vit D toxicity**

- a. Constipation
- b. Polyuria
- c. Polydipsia
- d. All of the above

Answer: d

**61. Treatment of hypervitaminosis D**

- a. Steroid
- b. Antibiotic
- c. Magnesium
- d.  $\text{Ca}^{+}$  supplementation



Answer: a

**62. The early sign of active rickets is**

- a. Craniotables
- b. Bow legs
- c. Harrison sulcus
- d. Frontal bossing

Answer: a

**63. Daily requirement of vit D is:**

- a. 400 IU/
- b. 300IU
- c. 1000 IU
- d. 900IU

Answer: a

**64. Mechanical compound in the skin from which vit D3 is formed**

- a. 17-hydrocholesterol
- b. 7- dehydrocholesterol
- c. 17- dehydrocholesterol
- d. 7-hydrocholesterol

Answer: b

**65. All of the following may be a predisposing factor for vit D def., Except:**

- a. Dark skin infants
- b. Excessive rapping of the infants
- c. Excess leafy green vegetable in diet
- d. Feeding fortified milk formula

Answer: d

**66. Rickets may be due to:**

- a. Hot weather
- b. Chronic renal failure
- c. Lack of Vit A
- d. Marasmus

Answer: b

**67. Which of the following should be avoided in an infant with galactosemia?**

- a. egg
- b. Rice
- c. milk
- d. wheat

Answer: c

**68. Which of the following about vit D metabolism is false?**

- a. It helps mobilization of Ca from bone
- b. 25 OH cholecalciferol can be detected in plasma
- c. kidney has a role in metabolism
- d. It requires bile for absorption.

Answer: a

**69. A 14 months old boy presenting with a current chest infection he is exclusively breast feed milk .no history of intake any vitamins or minerals, examination revealed large head. Distended abdomen, which of the following investigation is recommended:**

- a. Thyroid profile
- b.  $\text{Ca}^{++}$ , ph. & alkaline phosphatase
- c. Bronchoscopy.
- d. Ascitic fluid tab.

Answer: b

**70. A 18 months old boy presenting with delayed walking he is exclusively breast feed milk .no history of intake any vitamins or minerals, examination relieved distended abdomen & wrist broadening, which of the following investigations would be correct in this case:**

- a. Low serum ca, ph. & alkaline phosphatase.
- b. Normal ca, ph. & alkaline phosphatase.
- c. Normal ph., lower ca & high alkaline phosphatase.
- d. Normal ca, lower ph. & high alkaline phosphatase.

Answer: d

**71. A 16-year-old boy with delayed walking, delayed dentation & recurrent chest infection. He is exclusively breast fed, he received multiple medication and injections that not remembered by mother, recently he developed constipation, vomiting, polyuria. What is the most probable diagnosis:**

- a. Rickets & hypervitaminosis D
- b. Renal rickets
- c. Hepatic rickets
- d. Diabetic ketosis

Answer: a

**72. An 18 months old boy who is exclusive breast fed presenting with convulsions. he has rectal temperature 37.7c .Bp 100/70. anterior fontanelle width 1finger. Not bulging. which one of the following investigation might explain the cause of convulsion?**

- a. CSF examination
- b. Blood picture
- c. Serum  $\text{Ca}^{2+}$
- d. CT brain

Answer: c

**73. A 5-year old child come complaining of headache, on examination his height is below the 5th percentile, blood pressure is 140/100 respiratory rate is 40/m. The ends of his long bone look abnormal, which of the following investigation might be + in the case:**

- a. Abdominal sonar shows bilateral atrophic kidneys
- b. Chest x ray show pneumonia
- c. Blood gas analysis show respiratory acidosis.
- d. X-ray long bone show fracture.

Answer: a

**74. A 14-month-old boy who is exclusive breast fed, brought by his mother. Delayed walking, he receives multiple injections for ttt of his condition, history revealed recurrent vomiting, constipation & polyuria. One of the following investigations might be +ve in this case:**

- a. Serum  $\text{Ca}^{2+}$  8mg%
- b. Serum  $\text{Cu}^{2+}$  10mg%
- c. Serum phosphate 8mg%
- d. Plain x-rays abdomen shows multiple radio opaque lesions.

Answer: d

**75. A 14 months old boy presenting with chronic diarrhea & recurrent chest infection since birth, on examination he has a large head, broad wrist deformed thoracic cage & distended abdomen. The most likely diagnosis is:**

- a. Vit D deficiency rickets
- b. Cystic fibrosis
- c. Chronic hemolytic anemia
- d. Cow milk allergy

Answer: b

**76. A 18months old boy who is exclusively breast fed presenting with convulsions & contraction of his fingers & toes he is not fever, the best way to control convulsions in this patient is:**

- a. IV diazepam
- b. IV phenobarbitone
- c. IM calcium gluconate
- d. IV calcium gluconate

Answer: d

**77. A 14month infant present to clinic complain of poor weight gain & delayed walking, history of exclusive breast fed with little baby food on examination. He has large head, distended abdomen & palpable swelling at the wrist, what is the expected laboratory findings in this infant:**

- a. Low  $\text{Ca}^{++}$
- b. Low alkaline phosphatase
- c. Low phosphorus
- d. None of above.

Answer: c

**78. An 8-months boy presenting with generalized loss of fat but there is no edema, his current weight is 5kg. The total caloric need is:**

- a. 800 kcal/ day
- b. 500 kcal/day
- c. 200kcal/ day
- d. 400kcal/day

Answer: a

**79. A 15-months-old boy with history of meconium ileus at birth, then he showed recurrent chest infection in early infancy, at the age of 1 year many relative manifestations are present. Diagnosis may be:**

- a. Vit D dependent rickets

- b. Malabsorption due to cystic fibrosis
- c. Immunodeficiency
- d. None of above

Answer: b

**80. A 16 month infant is exclusively breast fed & show delayed walking, he received multiple injection for ttt of this condition. History show recent development of vomiting, constipation & polyuria. One of the following investigations to reveal the cause of hepatomegaly:**

- a. Liver enzyme: ALT&AST
- b. Measure the serum level of ptn
- c. Upper GIT endoscopy
- d. None of the above

Answer: b

**81. An 18-month-old boy present to your clinic, his birth weight was 3.5kg & his current weight is 4-5kg (less than the 5th percentile mother said that he drinks 60ml of humanized infant formula every 4hour, she also feeds him a small amount of rice since he was 5 months old, which of the following is sure sign to be present:**

- a. Loss of fat from the abdomen
- b. Senile face
- c. Edema of the dorsum of the foot
- d. Fatty hepatomegaly

Answer: c

**82. A 18 month old female infant presenting with recurrent chest infection, she is exclusive breast fed, examination revealed large head, distended abdomen, which of the following investigations will be needed:**

- a. High phosphorus
- b. Low calcium& high phosphorus
- c. Low urinary calcium
- d. Low alkaline phosphate

Answer: c

**83. A 2year old boy presents with delayed dentition & bone legs. He is exclusive breast fed, he received multiple medications & injections to treat his condition, recently he developed constipation, vomiting& polyuria, what is the most probable diagnosis:**

- a. Rickets with hypervitaminosis D
- b. Renal Rickets
- c. Hepatic Rickets
- d. Diabetic Rickets

Answer: a

**84. The best investigation to match the previous case is:**

- a. Low serum calcium
- b. High serum calcium & ph.
- c. Cardiac calcification
- d. None of above

Answer: b

**85. A 1-year old infant is complaining of delayed dentition, repeated chest infection, on examination, there is prominent costochondral junction, he is exclusive breast fed, he received multiple investigation for TTT of his condition, all of the following are expected complication for his condition except:**

- a. Anorexia
- b. Vomiting
- c. Oliguria
- d. Nephro calcification

Answer: c

**86. A 20-month-old child complain of acute respiratory infection, the child enters the exam room with a middling genit. Examination reveals prominent forehead, distend abdomen & thickening at the wrist ankle. Plain x-ray film reveals widened epiphyseal plate.**

**I. What is the most likely diagnosis (2011 sept):**

- a. Vit A deficiency
- b. Hyperparathyroidism
- c. Vit D deficiency
- d. Hypothyroidism

Answer: c

**II. The most likely biochemical findings:**

- a. Hypocalcemia
- b. Hypophosphatemia
- c. Hypophosphaturia
- d. Hyponatremia

Answer: b

**87. An 8 months old infant come with his parents to clinical, the main complaint is irritability in his left arm, his mother wasn't providing him any supplementation, he been exclusive breast fed since birth.**

**I. To manage this infant's irritability (2012 June):**

- a. Check his temperature
- b. Do an arm endograph
- c. prepare for CSF examination
- d. Give antispasmodic

Answer: b

**II. Possible association include:**

- a. Hydrocephalus
- b. Generalized edema
- c. Iron deficiency
- d. Atopic edema

Answer: c

**88. A 16 months old infant presents to clinical with chest infection & delayed walking, history show exclusive breast feeding with little baby food, on examination distended abdomen & swelling at costochondral junction with leg deformity.**

**What is the cause of delayed walking:**

- a. Large head
- b. Abdominal disturbance
- c. Skeletal deformity
- d. hypotension

Answer: c

# Genetics

---

## MCQ:

---

**1. All the following are later medical problems in Down syndrome, except:**

- a. Hearing impairment due to secretory otitis media.
- b. Hyperthyroidism.
- c. Visual impairment due to cataract.
- d. Increased incidence of leukemia.

Answer: b.

**2. Ring chromosome is a special type of chromosomal:**

- a. Deletion.
- b. Duplication.
- c. Translocation.
- d. Inversion.

Answer: a.

**3. A couple comes to see a pediatrician with their second son who has Down syndrome. Their first son is unaffected. They tell that there is a strong family history of Down syndrome, with one of their son's cousins also being affected and his uncle is also being affected.**

**I. What is the most likely cause of Down syndrome in this family?**

- a. Non-disjunction.
- b. Balanced translocation.
- c. Robertsonian translocation.
- d. Mosaic.

Answer: c.

**II. The following tests would be advised if this mother got pregnant, except:**

- a. Maternal ABO and Rh typing.
- b. Maternal alpha-fetoprotein.
- c. Estriol level in mother's urine.
- d. Maternal human gonadotropin.

Answer: a.

**4. Which of the following is not true about Klinefelter syndrome?**

- a. It is a chromosomal disorder of males.
- b. It causes infertility in males.
- c. Affected males are usually taller than average.
- d. It is transmitted by autosomal recessive inheritance.

Answer: d.

**5. All the following are transmitted by X-linked recessive inheritance, except:**

- a. Glucose-6-phosphate dehydrogenase deficiency.
- b. Galactosemia.

- c. Hemophilia B.
- d. Duchenne muscular dystrophy.

Answer: b.

**6. In genetic counseling, which of the following is not correct:**

- a. Recurrence risk of non-disjunction types of down syndrome increases with higher maternal age.
- b. Recurrence risk is generally very low (1%) in chromosomal abnormalities.
- c. Recurrence risk is quite high (25-50) in single gene inheritance.
- d. Recurrence risk in multifactorial (polygenic) inheritance is between 15-25%.

Answer: d.

**7. The mode of inheritance in galactosemia is:**

- a. X-linked recessive inheritance.
- b. X-linked dominant inheritance.
- c. Autosomal recessive inheritance.
- d. Autosomal dominant inheritance.

Answer: c.

**8. Which is not true about Klinefelter syndrome?**

- a. It is a rare chromosomal disorder of males, affecting 1/100.000 males.
- b. Clinical manifestations usually don't appear before puberty.
- c. Causes infertility in males.
- d. Affected males are usually taller than average.

Answer: a.

**9. Clinical situations suspecting chromosomal abnormalities include all, except:**

- a. Abnormal features.
- b. Mental retardation.
- c. Ambiguous genitalia.
- d. Precocious puberty.

Answer: d.

**10. In which of the following diseases may polygenic inheritance play a role:**

- a. Hereditary spherocytosis.
- b. Bronchial asthma.
- c. Hemophilia B.
- d. Sickle cell anemia.

Answer: b

**11. Which is not true about Klinefelter syndrome?**

- a. Infertility is the commonest presenting feature.
- b. Affects males only.
- c. The basic chromosomal disorder is presence of extra X chromosome.
- d. Patients usually have short stature.

Answer: d.

**12. The mode of inheritance of achondroplasia is:**

- a. Autosomal dominant.
- b. Autosomal recessive.



- c. X-linked recessive.
- d. X-linked dominant.

Answer: a.

**13. In genetic counseling, which of the following has the highest recurrence risk:**

- a. Chromosomal abnormalities.
- b. Single gene disorders.
- c. Diseases with multifactorial inheritance.
- d. None of the above.

Answer: b.

**14. Chromosomal aberration in trisomy 21 can be one of the following:**

- a. Structural.
- b. Numerical.
- c. Both.
- d. None.

Answer: c.

**15. A young lady with normal premarital ultrasound complained that her first male baby was diagnosed in utero to have bilateral renal enlargement, and her second labor ended with a twin (2 girls), one of them suffered from the same problem. Although her husband was apparently normal, his renal ultrasound was not. Which mode of inheritance do you suggest:**

- a. Autosomal dominant.
- b. Autosomal recessive.
- c. Sex-linked.
- d. Gene mutation.

Answer: a.

**16. All are examples of sex linked diseases, except:**

- a. G6PD deficiency.
- b. Galactosemia.
- c. Hemophilia.
- d. None of the above.

Answer: b.

**17. Genetic counseling is indicated in:**

- a. Families with inherited disorders.
- b. Pregnant mothers in contact with German measles.
- c. Pregnant mothers exposed to irradiations.
- d. All of the above.

Answer: a.

**18. Recurrence risk in autosomal recessive diseases is:**

- a. 75%.
- b. 25%.
- c. 50%.
- d. 100%.

Answer: b.

**19. Genetic counseling is indicated in all the following, except:**

- a. History of repeated stillbirths.
- b. Maternal diabetes.
- c. Previous history of child with thalassemia major.
- d. Families with inherited disorders.

Answer: b.

**20. What is the risk for a woman to be a carrier if she is the daughter of a man having hemophilia (X-linked recessive disorder):**

- a. 100%.
- b. 50%.
- c. 25%.
- d. 0%.

Answer: a.

**21. Characteristic features of autosomal recessive inheritance include:**

- a. 50% risk of recurrence.
- b. More males are affected.
- c. Consanguineous marriage is not a feature.
- d. The trait appears in sibs rather than parents or offspring.

Answer: d.

**22. One of the following anomalies is not associated with down syndrome:**

- a. Mental retardation.
- b. Congenital heart disease.
- c. Simian crease.
- d. Webbing of neck.

Answer: d.

**23. All the following are examples of multifactorial inheritance, except:**

- a. Congenital heart disorders.
- b. Club foot.
- c. Osteogenesis imperfecta.
- d. Congenital pyloric stenosis.

Answer: c.

**24. In autosomal dominant disorders:**

- a. Such disease is not manifested in the heterozygous.
- b. Phenylketonuria is a good example.
- c. Variability of expression is very uncommon.
- d. The offspring of apparently healthy individuals are usually unaffected.

Answer: d.

**25. Which of the following is true about autosomal recessive disorder?**

- a. Affected person married to a homozygous normal individual has an equal chance of producing either normal or affected offspring.
- b. Most of the affected persons are offspring of apparently normal parents.
- c. After birth of one affected offspring, recurrence risk is 50%.
- d. Parents of affected person are usually not consanguineous.

Answer: b.

**26. Which is true about down syndrome:**

- a. About 5% are due to mosaicism.
- b. Incidence increases with increased paternal age.
- c. Hypertonia is a common finding.
- d. Delayed milestones of development is nearly a constant finding.

Answer: d.

**27. The following is an important cause of language delay:**

- a. Cleft lip.
- b. Turner syndrome.
- c. Visual impairment.
- d. Deafness.

Answer: d.

**28. About autosomal recessive inheritance:**

- a. It is not manifested in the heterozygous.
- b. After birth of one affected offspring, recurrence risk is 50%.
- c. Parents of affected person are usually not consanguineous.
- d. Offspring of apparently healthy individuals are unaffected.

Answer: a.

**29. Which is correct about down syndrome:**

- a. About 1% is due to mosaicism.
- b. Late maternal age is commonly seen in translocation type.
- c. Hyper reflexia is common finding.
- d. Delayed milestones is seen in 25% of cases.

Answer: a.

**30. The following are found in newborn infant with down syndrome, except:**

- a. Hypotonia.
- b. Asymmetrical growth retardation.
- c. Brachycephaly.
- d. Upward slanting palpebral fissure.

Answer: b.

**31. Turner syndrome is characterized by all except:**

- a. Tall stature.
- b. Webbing of neck.
- c. Cubitus valgus.
- d. Gonadal dysgenesis.

Answer: a.

**32. Which of the following is not true about Turner syndrome?**

- a. Short stature.
- b. Webbing of neck.
- c. The basic chromosomal disorder is the presence of one X chromosome only.
- d. Precocious puberty.

Answer: d.

**33. All are characteristics of autosomal recessive inheritance, except:**

- a. Affected individuals are only homozygous.
- b. When parents have one affected child, the risk to each subsequent offspring is 1 in 2.
- c. Unaffected individuals can be normal or carriers.
- d. Strongly related to consanguineous marriage.

Answer: b.

**34. In which of the following may polygenic inheritance play a role:**

- a. Duchenne muscular dystrophy.
- b. Hereditary spherocytosis.
- c. Type 1 diabetes mellitus.
- d. Sickle cell anemia.

Answer: c.

**35. A 15-year-old boy presented with bilateral enlargement of the breasts (gynecomastia).**

**The parents were worried about the future of their son as they noticed apparently small testicles. The height of the patient was on the 99<sup>th</sup> percentile for age and sex.**

**I. The most likely diagnosis:**

- a. Turner syndrome.
- b. Klinefelter syndrome.
- c. Ambiguous genitalia (intersex).
- d. Premature adrenarche.

Answer: b.

**II. The genetic defect of this condition is:**

- a. Autosomal dominant inheritance.
- b. X-linked recessive inheritance.
- c. Sex chromosome abnormality.
- d. Polygenic inheritance.

Answer: c.

# Infections & vaccination

---

## MCQ:

---

**1. Prolonged febrile illness occurs most likely in: "2012"**

- a. Pneumonia
- b. Brain abscess
- c. Stomatitis
- d. Tonsillitis

Answer: b

**2. A 10-month-old infant presents with a 1-day history of a blanching confluent rash which started on his face and now covers his entire body. He is miserable with conjunctivitis and fever of 38.5°C. The illness started with runny nose and cough 5 days previously. (June, 2008)**

**What is the most likely diagnosis:**

- a. Scarlet fever.
- b. Rubella.
- c. Roseola infantum.
- d. Measles.

Answer: d.

**3. A 5-year-old child developed maculopapular rash starting in the face and progressing downwards on the body. This was preceded by five-day febrile illness with runny nose and congested red eyes. (September, 2008)**

**What is the most likely diagnosis:**

- a. Scarlet fever.
- b. Sweat rash.
- c. Chicken pox.
- d. Measles.

Answer: d.

**4. Measles rash begins: (June, 2009)**

- a. On chest and back.
- b. Behind ear.
- c. Behind neck.
- d. On the face.

Answer: b.

**5. All the following infectious diseases are essentially associated with rash, except:**

- a. German measles.
- b. Chicken pox.
- c. Mumps.
- d. Roseola infantum.

Answer: c.

**6. Which of the following is correct about measles rash: (September, 2009)?**

- a. It appears on the 2<sup>nd</sup> day of fever.
- b. It starts behind the ear.
- c. It is a papulo-vesicular rash.
- d. It starts one day before appearance of koplik's spots.

Answer: b.

**7. Which of the following infectious diseases is essentially associated with maculopapular rash:**

- a. Chicken pox.
- b. Mumps.
- c. Roseola infantum.
- d. Hepatitis B.

Answer: c.

**8. Complications of scarlet fever include all the following, except: (June 2010)**

- a. Submandibular lymphadenitis.
- b. Otitis media.
- c. Acute glomerulonephritis.
- d. Pan encephalitis.

Answer: d.

**9. Koplik's spots:**

- a. Develop synchronously with the eruptions on the skin.
- b. Seen in the late phase of the catarrhal incubation period.
- c. Most common during the convalescent phase.
- d. Caused by bacterial super-infection.

Answer: b.

**10. Skin rash maybe seen in all the following, except:**

- a. Urticaria.
- b. Antibiotic therapy.
- c. Mumps.
- d. Hot weather.

Answer: c.

**11. One of the following is correct about measles rash: (September 2010)**

- a. It starts on the trunk.
- b. When it appears, the fever rises abruptly.
- c. It is a vesiculo-papular rash.
- d. It appears 12-24 hours after onset of prodromal stage.

Answer: b.

**12. Presence of a rash is essential for diagnosis in all the following, except:**

- a. German measles.
- b. Infectious mononucleosis.
- c. Measles.
- d. Scarlet fever.

Answer: b.

**13. Vesicular eruption can be caused by any of the following, except:  
(June 2011)**

- a. Chicken pox.
- b. Herpes zoster.
- c. Rubella.
- d. Hand, foot and mouth disease.

Answer: c.

**14. Complications of measles include all the following, except:**

- a. Encephalitis.
- b. Myocarditis.
- c. Congenital anomalies.
- d. Subacute sclerosing pan-encephalitis.

Answer: c.

**15. The following viral infections are essentially associated with maculopapular rash:  
(September, 2011)**

- a. Varicella.
- b. Mumps.
- c. Human herpes virus 6.
- d. Hepatitis B.

Answer: c.

**16. Mumps can cause all the following, except:**

- a. Encephalitis.
- b. Skin rash.
- c. Pancreatitis.
- d. Orchitis.

Answer: b.

**17. A skin rash is not an essential part of diagnosis in: (June 2012)**

- a. Infectious mononucleosis.
- b. Varicella-Zoster infection.
- c. Rubella.
- d. Measles.

Answer: a.

**18. Scarlet fever:**

- a. It is caused by group beta hemolytic streptococci.
- b. It is most common between 6 months – 2 years.
- c. Incubation period is 2-4 days.
- d. The rash appears on the 4<sup>th</sup> day of fever.

Answer: c.

**19. A 17-month-old girl presented to her pediatrician with fever 40°C of 2 days duration. On examination, there were no signs to explain this fever. The doctor described antipyretics only. On the 4<sup>th</sup> day of illness, the fever disappeared suddenly, and a maculopapular rash appeared in the same day. The rash started over the trunk then spread to the neck, arms and face. The rash faded within 24 hours. (July 2015)**

**I. The most likely diagnosis is:**

- a. Measles.
- b. Rubella.
- c. Roseola infantum.
- d. Scarlet fever.

Answer: c.

**II. The most likely complication in this patient is:**

- a. Acute rheumatic fever.
- b. Encephalitis.
- c. Secondary bacterial infection.
- d. Febrile convulsions.

Answer: d.

**20. The causative agent of infectious mononucleosis;**

- a. EBV ✓
- b. Human herpes virus 6
- c. parvovirus B19
- d. rubeola virus

Answer: a

**21. ALL of the following statements are true about chickenpox (varicella) except:**

- a. The IP is 5-10 days
- b. Dry are non-infective
- c. The rash appears in successive crops over 3-4 days
- d. The has a centripetal distribution

Answer: a

**22. All of the following statements are about herpes simplex meningoencephalitis Except**

- a. It may occur even in the absence of skin lesion.
- b. The illness is severe with high mortality
- c. EEG shows occipital lobe abnormalities
- d. Acyclovir is the drug of the choice

Answer: c

**23. The IP of German measles is;**

- a. 1-7 days
- b. 7-10 days
- c. 2-3 weeks
- d. 5-6 weeks

Answer: c



**24. In a child with encephalitis, which of the following viruses has a special predilection to the temporal lobes (preferentially affects the temporal lobes)**

- a. Herpes simplex
- b. Mumps virus
- c. Rabies virus
- d. Measles virus

Answer: a

**25. An 8-year girl presents with a low-grade fever and diffuse maculopapular rash. on examination, her physician notes mild tenderness and marked swelling of her posterior cervical and occipital lymph node. three days after the onset of illness, the rash disappeared**

**i. the most likely diagnosis**

- a. Measles
- b. German measles
- c. Scarlet fever
- d. Typhoid

Answer: b

**ii. one of the following is not correct about diagnosis**

- a. IP 5-7 days
- b. Complications are not common
- c. This could have been prevented by Alive attenuated vaccine ✓
- d. Throat signs are not prominent

Answer: a

**26. IP period is 2-3 wks. Except:**

- a. Mumps
- b. Measles
- c. Chicken pox
- d. Diphtheria

Answer: b & e are correct!

**27. One's correct in mumps:**

- a. Caused by adeno virus
- b. IP is 10 days
- c. Called epidemic parotitis
- d. Pain aggravated by sour drinks

Answer: c

**28. Mumps may cause all the following except:**

- a. Encephalitis
- b. Rash
- c. Pancreatitis
- d. Orchitis

Answer: b

**29. Mumps may be complicated by all except:**

- a. Pancreatitis
- b. Epididymo-orchitis

- c. Encephalitis
- d. Rh fever

Answer: d

**30. A young girl has had fungal infection with candida albicans & respiratory viruses at the time she was 3 months old. Immunological study revealed defect on both T lymphocytes & B lymphocytes activities & advised not to receive certain vaccines which of the following vaccines is contradicted for this girl? (June 2010)**

- a. Hepatitis B vaccine
- b. Hepatitis A vaccine
- c. BCG vaccine
- d. Salk polio vaccine

Answer: C

**31. Which of the following vaccine can be given to a child with immune deficiency? (June 2009)**

- a. Oral polio vaccine
- b. Varicella vaccine
- c. Measles-Mumps, rubella vaccine
- d. Hepatitis b vaccine

Answer: d

**32. Which of the following is not compulsory vaccine given in the 1ST year of life (June 2009)?**

- a. Measles vaccine
- b. BCG vaccine
- c. Meningitis vaccine
- d. Polio vaccine

Answer: c

**33. Oral polio vaccine (sep 2009)**

- a. It's known as Salk vaccine
- b. It's alive attenuated vaccine
- c. It's preserved at temperature 15-20 degree centigrade
- d. It's recommended to be given at 4,8,12 months age

Answer: b

**34. All the following disease can be prevented by vaccination except**

- a. Measles
- b. Mumps
- c. Scarlet fever
- d. Varicella

Answer: c

**35. Which of the following vaccine can be given to child with immunodeficiency (June 2010)**

- a. DPT
- b. Varicella
- c. MMR
- d. Oral polio

Answer: a

**36. One of the following is correct about oral polio vaccine (sept 2010)**

- a. it was invented by Jonas Salk
- b. it gives only humoral immunity
- c. it should be given immediately after breast feeding
- d. It's recommended to give a booster dose at 18 months of age

Answer: d

**37. The following infection are largely preventable by vaccines except: (June 2011)**

- a. Poliomyelitis
- b. Measles
- c. Epstein Barr virus
- d. Diphtheria

Answer: c

**38. One of the following is not a live vaccine (June 2011)**

- a. Sabin
- b. MMR
- c. BCG
- d. Pneumococci

Answer: d

**39. Which of the following can be prevented by vaccines (sept 2011)?**

- a. scarlet fever
- b. viral C hepatitis
- c. infectious mononucleosis
- d. neonatal tetanus

Answer: d

**40. About Rota virus vaccine**

- a. It's a trivalent vaccine
- b. It's given subcutaneous
- c. The 1st dose is given at the age of 4 months
- d. Vaccination should be completed before 8 months of age

Answer: d

**41. The meningococcal vaccine is**

- a. Scapular polysaccharide vaccine
- b. A live attenuated vaccine
- c. A killed vaccine
- d. A recombinant DNA vaccine

Answer: a

**42. The pentavalent rota virus vaccine is given (June 2016. may2017)**

- a. One dose at age of 2 month
- b. 2 doses at age of 2,4 months
- c. 3 doses at age of 2,4,6 months
- d. 4 doses at the age of 2,4,6,9 months

Answer: c

**43. Which of the following not vaccine preventable (June 2016, may 2017)?**

- a. Hepatitis B
- b. Invasive pneumococci
- c. Rabies
- d. Infectious mononucleosis

Answer: d

# Emergency

---

## MCQ:

---

- 1. An 8-year-old male presents to the emergency department with decreased mental status. He has been drinking and urinating more frequently over the past several weeks. He was hard to wake up this morning and complained of abdominal pain. Physical examination reveals dry mucus membranes and cracked lips. His abdomen is mildly tender to palpation diffusely, but there is no re-bound or guarding.**

**I. Expected findings don't include:**

- a. A blood glucose level of 560 mg/dl.
- b. A blood pH value of 7.18.
- c. Clear chest x-ray.
- d. Low serum osmolarity.

Answer: d.

*N.B. DKA = hypertonic dehydration.*

**II. The most immediate initial therapy is:**

- a. IV normal saline.
- b. IV sodium bicarbonate.
- c. IV mannitol.
- d. IV potassium.

Answer: a.

- 2. The most important drug that maybe life-saving in a child with anaphylaxis is:**

- a. IM epinephrine (adrenaline).
- b. IV corticosteroid.
- c. IM antihistamine.
- d. Oral corticosteroid.

Answer: a.

- 3. The child who can't be aroused by painful stimuli, but responds by moaning or withdrawal movements is described to be in which grade of coma:**

- a. Grade 1.
- b. Grade 2.
- c. Grade 3.
- d. Grade 4.

Answer: b.

- 4. In type 1 respiratory failure all of the following are true except:**

- a. The basic defect is in oxygenation.
- b.  $\text{PaCO}_2$  is always elevated.
- c. Acute metabolic acidosis is a common acid base disturbance.
- d. Pneumonia is among its leading causes.

Answer: b.

**5. Possible causes of acute respiratory failure include:**

- a. Cerebral palsy.
- b. Drug intoxication.
- c. Acute bronchitis.
- d. DKA.

Answer: b.

**6. A 6-year-old boy presented with impaired level of consciousness of 6 hours duration. The patient had no response at all to painful stimuli. The mother said he was drinking a lot of water and juices in the last 10 days and passing plenty of urine. The child is not known to be diabetic. On arrival, his oral temperature was 37.2°C, HR 115/minute, BP 80/50. Respiration was deep at a rate of 39 breaths per minute. CBC was normal apart from a slightly high hemoglobin level (17 gm/dl).**

**I. The child is described to have:**

- a. Stupor.
- b. Delirium.
- c. Light coma.
- d. Deep coma.

Answer: d.

**II. The most likely diagnosis is:**

- a. Diabetic ketoacidosis.
- b. Intracranial hemorrhage.
- c. Hypoglycemia.
- d. Renal failure.

Answer: a.

**7. In a patient with grade 3 coma (deep coma), which of the following is true:**

- a. Can be aroused for short periods.
- b. Can breathe spontaneously.
- c. Responds to painful stimuli by withdrawal movements.
- d. Is brain dead.

Answer: b.

**8. All are signs of poor peripheral perfusion, except:**

- a. Peripheral cyanosis.
- b. Increased core-peripheral temperature difference > 2°C.
- c. Capillary refill of 4 seconds.
- d. Skin mottling.
- e. Cold extremities.

Answer: c.

**9. A 3-year-old boy presented to ER with impaired level of consciousness and shallow irregular breathing. The PaCO<sub>2</sub> was 62 mmHg and the PaO<sub>2</sub> was 98 mmHg at room air. There was a history of blunt trauma to the head since 3 hours.**

**I. Blood gases shows that the child has:**

- a. Type 1 respiratory failure.
- b. Type 2 respiratory failure.
- c. Metabolic alkalosis.

- d. Metabolic acidosis.

Answer: b.

**II. The most likely cause is:**

- a. Intracranial hemorrhage.
- b. Drug intoxication.
- c. Respiratory muscle fatigue.
- d. Diabetic ketoacidosis.

Answer: a.

**10. The most urgent management of hypovolemic shock is:**

- a. Oxygen therapy.
- b. Assisted ventilation.
- c. IV fluids.
- d. IV antibiotics.

Answer: c.

**11. Acute congestive heart failure is not common in:**

- a. Fallot tetralogy.
- b. Acute renal failure.
- c. Ventricular septal defect (VSD).
- d. Severe tachycardia.

Answer: a.

**12. One of the following is correct about croup:**

- a. It's mostly due to viral infection.
- b. Cold air aggravates the condition.
- c. Females are much more affected than males.
- d. Cause soft musical sound.

Answer: a.

**13. Common causes of stridor during include the following except:**

- a. Laryngeal foreign body.
- b. Acute spasmodic laryngitis.
- c. Large adenoid.
- d. Hypocalcemia tetany.

Answer: c.

**14. In respiratory failure, all the following statements are true except:**

- a. Can be caused by upper air way obstruction.
- b.  $\text{PaCO}_2$  is always elevated in type 2 respiratory failure.
- c. All hypoxic patients need endotracheal intubation & mechanical ventilation.
- d. Acute metabolic acidosis is the typical in type 1 RF.

Answer: c.

**15. In which grade of respiratory distress cyanosis appears:**

- a. Grade 1.
- b. Grade 2.
- c. Grade 3.
- d. Grade 4.

Answer: d.

**16. In respiratory failure, which of the following is not correct:**

- a. Can be caused by bronchial asthma.
- b. Fatigue of respiratory muscle can lead to type 2 RF.
- c. All patients should be mechanically ventilated.
- d. Acute respiratory acidosis is typical finding in type 2 RF.

Answer: c.

**17. The O<sub>2</sub> analyzer is a device used for:**

- a. Knowing the FiO<sub>2</sub> in a head box.
- b. Knowing the FiO<sub>2</sub> of gas coming from ventilator.
- c. Knowing the patient's PaCO<sub>2</sub>.
- d. Knowing the patients SaO<sub>2</sub>.

Answer: a.

**18. Bag & mask ventilation is contraindicated in:**

- a. Birth asphyxia.
- b. Neonatal apnea.
- c. Hyaline membrane disease.
- d. Diaphragmatic hernia.

Answer: d.

**19. Regarding hemodynamic parameters in different types of shock, all are true, except:**

- a. Cardiac output is decreased in hypovolemic shock.
- b. Central venous pressure is decreased in hypovolemic shock.
- c. Cardiac output is decreased in cardiogenic shock.
- d. Central venous pressure is decreased in cardiogenic shock.

Answer: d.

**20. What is the most appropriate management of hypovolemic shock:**

- a. Dopamine infusion.
- b. Adrenaline.
- c. Sodium bicarbonate.
- d. IV fluids.

Answer: d.

**21. All the following are true, except:**

- a. Pulse oximeter is a device that measures oxygen saturation.
- b. Pulse oximetry is simple and non-invasive.
- c. Oxygen saturation is considered normal when it is >85%.
- d. Pulse oximeter can't measure hyper-oxygenation of the blood.

Answer: c.

**22. Which of the following drugs is an afterload reducing agent:**

- a. Digoxin.
- b. Captopril.
- c. Furosemide (Lasix).
- d. Epinephrine.

Answer: b (vasodilator).



**23. Croup is caused by:**

- a. Rhinovirus.
- b. Adenovirus.
- c. Parainfluenza virus.
- d. Influenza virus.

Answer: c.

**24. A 15-month-old infant has a history of poor oral fluid intake, occasional vomiting, rapid breathing, and decreased urine output (< 1 ml/kg/hour). Examination reveals a heart rate of 150 beats per minute, blood pressure of 120/80 mmHg, and a respiratory rate of 60/minute. There are bilateral basal crepitations and the liver is palpable 4 cm below the right costal margin. What is the most appropriate next step:**

- a. Boluses of normal saline 20 ml/kg IV.
- b. Start digoxin IV (digitalizing dose).
- c. Give a dose of IV furosemide.
- d. Initiate IV antibiotics.

Answer: c.

**25. In arterial blood gases analysis (ABG), all the following are true except:**

- a. Normal PaO<sub>2</sub> is 95-100 mmHg.
- b. Normal PaCO<sub>2</sub> is 35-40 mmHg.
- c. Normal pH is 7.1-7.25.
- d. Normal bicarbonate is 22-26 mEq/L.

Answer: c.

**26. Which of the following is not a feature of right sided heart failure:**

- a. Ascites.
- b. Hepatomegaly.
- c. Limb edema.
- d. Pulmonary edema.

Answer: d.

**27. A 10-year-old girl is involved in a motor car accident, sustaining multiple injuries to her head, arms, and abdomen. Her BP is 90/60 mmHg, and her pulse is 120/minute. She has breathing difficulty, cyanotic lips, and rigid abdomen.**

**I. The most likely diagnosis is:**

- a. Septic shock.
- b. Cardiogenic shock.
- c. Hypovolemic shock.
- d. Obstructive shock.

Answer: c.

**II. The most appropriate next step in management is:**

- a. Do ultrasound abdomen.
- b. Give crystalloid solution.
- c. Administer inotropic drugs.
- d. Perform exploratory laparotomy.

Answer: b.

**28. The management of diabetic ketoacidosis must include all except:**

- a. IV fluids.
- b. IV insulin infusion.
- c. Slow IV infusion of sodium bicarbonate.
- d. Continuous monitoring of blood sugar.

Answer: c.

**29. A 5-year-old male is brought to the emergency room with harsh barking cough. He has history of coryza, nasal congestion & sore throat. His symptoms have been present for about a week. Examination reveals T 38°C, HR 100, RR 22. He has mild respiratory distress, stridor, intercostal interactions & nasal flaring. What is the most likely diagnosis?**

- a. Diphtheria.
- b. Croup.
- c. Epiglottitis.
- d. Angioedema.

Answer: b.

**30. Which of the following is not true about croup:**

- a. Harsh inspiratory sound.
- b. Steam inhalation improves the condition.
- c. All patients should be hospitalized.
- d. Acute viral laryngitis is a common cause.

Answer: c.

**31. Regarding stridor, all are true except:**

- a. It is a harsh inspiratory sound.
- b. It is caused by partial obstruction of upper airways.
- c. Grade 2 stridor is defined as stridor on exertion.
- d. Patients with grade 3 stridor need hospital admission.

Answer: c.

**32. A 5-year-old boy developed severe sore throat, dripping of saliva. History of fever & increasing breathing difficulty over 8 hours. He looks toxic & unable to speak. Was sitting immobile upright with an open mouth to optimize the airway. Her airway was maintained with endotracheal tube:**

**I. What is the most likely diagnosis?**

- a. Acute bronchitis.
- b. Acute epiglottitis.
- c. Acute laryngitis.
- d. Acute laryngotracheitis.

Answer: b.

**II. What is the likely possible agent?**

- a. Hemophilus influenza.
- b. Respiratory syncytial viruses.
- c. Para influenza virus.
- d. Staphylococcus aureus.

Answer: a.

**33. The DINAMAP is a device used to measure:**

- a. Blood pressure.
- b. Oxygen saturation.
- c. FiO<sub>2</sub>.
- d. Cardiac output.

Answer: a.

**34. In shock all are true except:**

- a. CVP is ↑ in cardiogenic shock.
- b. BP is decreased in all stages.
- c. Severe dehydration may cause hypovolemic shock.
- d. Tension pneumothorax may cause obstructive shock.
- e. CVP is low in hypovolemic shock.

Answer: b.

**35. In shock, all are true except:**

- a. CVP (central venous pressure) is elevated in cardiogenic shock.
- b. Blood pressure is not decreased in early (grade 1) shock.
- c. Cardiac output is decreased in distributive (kinetic) shock.
- d. CVP is low in hypovolemic shock.

Answer: c.

**36. Manifestation of hypovolemic shock include all except:**

- a. Pallor & cold extremities.
- b. Tachycardia.
- c. High CVP.
- d. Increased SVR.

Answer: c.

**37. A 10-year-old boy presented with impaired level of consciousness of 12 hours duration. The patient could be aroused for only short periods during which he responded to simple verbal and motor commands. The mother says he was perfectly normal when he went to play football with his neighbors. On arrival, his Hb was 7 gm/dl, temperature 37.2°C, HR 55/minute, BP 130/80.**

**I. The child is described to have:**

- a. Stupor.
- b. Delirium.
- c. Light coma.
- d. Deep coma.

Answer: a.

**II. The cause of this coma is likely to be:**

- a. DKA.
- b. Intracranial hemorrhage.
- c. Renal failure.
- d. Acute hepatic failure.

Answer: b.

**38. A 10-year-old girl presented to ER with abdominal pains and recurrent vomiting in the last few days. On examination, she was afebrile (temperature 36.8°C), moderately dehydrated with impaired LOC (level of consciousness). The mother said that her daughter was drinking too much water and juices in the last week.**

**I. The most urgent lab tests you need to request is:**

- a. Blood urea and serum creatinine.
- b. Blood sugar.
- c. Blood ammonia.
- d. CSF examination and culture.

Answer: b.

**II. Breathing is expected to be:**

- a. Rapid and deep.
- b. Rapid and shallow.
- c. Slow and deep.
- d. Slow and shallow.

Answer: a.

**III. The child is expected to have:**

- a. Metabolic acidosis.
- b. Metabolic alkalosis.
- c. Respiratory acidosis.
- d. Respiratory alkalosis.

Answer: a.

**39. A child with a Glasgow coma score of 15 is expected to be:**

- a. Fully conscious.
- b. In grade I coma (stupor).
- c. In grade II coma (light coma).
- d. In grade III coma (deep coma).

Answer: a.

**40. Which of the following is likely to cause afterload heart failure:**

- a. Severe tachycardia.
- b. Rheumatic myocarditis.
- c. Systemic hypertension.
- d. Myocardial infarction.

Answer: c.

**41. Which lab finding is considered abnormal:**

- a. Serum K<sup>+</sup> of 4 mEq/L.
- b. Serum creatinine of 2 mg/dl.
- c. Blood urea of 25 mg/dl.
- d. PH of blood 7.4.

Answer: b.

N.B.

*Normal serum urea: 20-40 mg/dl.*

*Normal serum creatinine: 0.5-1.5 mg/dl.*

**42. Main step in the management of coma in children include all of the following except:**

- a. Keep open airway.
- b. Artificial breathing.
- c. Cardiac decompression.
- d. Defibrillation.

Answer: c.

**43. Main step in management of coma in children include all except:**

- a. Maintain oxygenation.
- b. Cardiac decompression.
- c. Check blood sugar.
- d. Keep airway open.

Answer: b.

**44. The term status epilepticus is used when the clonic phase of a tonic clonic seizure exceeds...minutes:**

- a. 10.
- b. 15.
- c. 20.
- d. 30.

Answer: d

**45. The acidotic breathing is:**

- a. Shallow rapid.
- b. Deep rapid.
- c. Irregular slow.
- d. Irregular rapid.

Answer: b.

**46. In pediatric emergency situations:**

- a. Primary survey aims at discovering the failing system.
- b. Hypoxia is a relatively common event.
- c. Infants have relatively small tongue.
- d. Specific treatment is the first priority.

Answer: b.

**47. Advantages of flow-inflating (anesthesia) bags include all except:**

- a. Easy to use.
- b. Stiff lung can be recognized.
- c. Any leak is determined.
- d. Delivers 100% oxygen at all times.

Answer: a.

**48. Common findings in infants with congestive heart failure include all the following except:**

- a. Tachypnea.
- b. Tachycardia.
- c. Excessive sweating.
- d. Splenomegaly.

Answer: d.

**49. The most common cause of pediatric shock is:**

- a. Acute gastroenteritis.
- b. Diabetic ketoacidosis.
- c. Rheumatic heart disease.
- d. Air embolism.

Answer: a.

**50. Congestive heart failure in infants rarely causes:**

- a. Feeding difficulty.
- b. Pedal edema.
- c. Hepatomegaly.
- d. Tachycardia.

Answer: b.

**51. Important liver function includes:**

- a. Maintenance of blood glucose concentration.
- b. Excretion of nitrogen waste as ammonia.
- c. Control of insulin release.
- d. Production of gamma globulin.

Answer: a.

**52. Liver cell failure is characterized by all the following, except:**

- a. Gynecomastia.
- b. Hypoammonemia.
- c. Encephalopathy.
- d. Bad oral smell.

Answer: b.

**53. A 9-month-old child is referred with pallor, vomiting and diarrhea. He became unwell 48 hours ago and has rapidly deteriorated. He has wet his nappy once in the past 24 hours. He has cool mottled peripheries and a capillary refill time of 4 seconds. Pulses are equal in all 4 limbs. He responds weakly to voice. His abdomen is soft and skin turgor is reduced.**

**I. What is the most likely type of shock:**

- a. Cardiogenic.
- b. Distributive.
- c. Hypovolemic.
- d. Septic.

Answer: c.

**II. What is the appropriate plan of therapy:**

- a. IV fluids.
- b. Diuretics.
- c. Digoxin.
- d. Antibiotics.

Answer: a.

**54. During therapy with oxygen, all are true except:**

- a. Oxygen should be warm.
- b. Oxygen should be humidified.
- c. Use the least possible  $\text{FiO}_2$  that can achieve acceptable level of  $\text{PaO}_2$ .
- d. Discontinue oxygen therapy when oxygen saturation is regularly above 85%.

Answer: d.

**55. A 2-week-old infant presents to emergency department with a 1-day-history of decreased feeding and lethargy. He was born at term and the delivery was uncomplicated. On physical examination, his temperature was  $39^\circ\text{C}$ , his heart rate is 150 beats/minute, his respiratory rate is 60 breaths per minute, his blood pressure is 50/30 mmHg, and his extremities are cool and pale with poor pulses.**

**I. The most appropriate test is:**

- a. ECG and echo.
- b. CBC and blood culture.
- c. Lumbar puncture and CT head.
- d. Serum electrolytes and CT chest.

Answer: b.

**II. The most likely diagnosis is:**

- a. Septic shock.
- b. Hypovolemia.
- c. Acute hemolysis.
- d. Cardiogenic shock.

Answer: a.

**56. Fluid of choice in hypovolemic shock is:**

- a. Glucose 10%.
- b. Half normal saline.
- c. Sodium bicarbonate.
- d. Ringer's lactate.

Answer: d.

**57. Usual signs of heart failure in infants include:**

- a. Edema and ascites.
- b. Hepatosplenomegaly.
- c. Congested neck veins.
- d. Tachycardia and hepatomegaly.

Answer: d.

**58. Causes of metabolic acidosis include all except:**

- a. Pyloric stenosis.
- b. Severe gastroenteritis.
- c. Diabetic ketoacidosis.
- d. Shock.

Answer: a.

**59. In metabolic acidosis, all the following are true except:**

- a. PH of blood is below normal.
- b. Breathing is rapid and shallow.

- c. Hypoxia can be a cause.
- d. Serum bicarbonate is decreased.

Answer: b.

**60. In shock, all the following are true except:**

- a. CVP is elevated in cardiogenic shock.
- b. CVP is indicative of preload.
- c. SVR is indicative of afterload.
- d. CVP is elevated in hypovolemic shock.

Answer: d.

**61. A 5-year-old girl is presenting with drowsiness and vomiting. She has no significant medical history. On examination, she appears unwell and irritable. She is clinically dehydrated and has diffuse abdominal tenderness. Her temperature is 37.8°C, respiratory rate 45, heart rate 170 and BP 90/50. Her breath smells strange.**

**I. The most important investigation needed:**

- a. Chest x-ray.
- b. Blood culture.
- c. Check urine for glucose.
- d. Echo.

Answer: c.

**II. Dehydration in this case is mainly due to:**

- a. Diarrhea.
- b. Polyuria.
- c. Anorexia.
- d. Tachypnea.

Answer: b.

**62. Manifestations of diabetic ketoacidosis include all except:**

- a. Sweating.
- b. Vomiting.
- c. Respiratory distress.
- d. Abdominal pain.

Answer: a.



# Neonatology

---

## MCQ:

---

**1. Which of the following is correct about Moro's reflex?**

- a. It starts with shoulder adduction of the arm. Abduction.
- b. A cry may follow the response.
- c. It is associated with fisted hands.
- d. Trunk flexion occurs initially.

Answer: b

**2. Neonatal screening and early intervention could prevent mental retardation in:**

- a. Primary microcephaly.
- b. Congenital infections.
- c. PKU "phenyl ketonuria".
- d. Structural brain malformations.

Answer: c

**3. The baby whose birth weight is 2250 gm and born at 36 weeks of gestation is:**

- a. Full term baby with normal birth weight.
- b. Post term baby with moderately low birth weight.
- c. Preterm baby with low birth weight.
- d. Preterm baby with normal birth weight.

Answer: c

**4. In neonatal resuscitation, which of the following statement is not correct:**

- a. Count the HR in 6 seconds and multiply it by 10.
- b. If HR above 100 min, nothing is needed as long as the baby is breathing spontaneously.
- c. If HR between 60-100 start positive pressure ventilation.
- d. Start chest compression and PPV immediately once HR is 40 min or less.

Answer: d

**5. A 4-day-old girl has jaundice, first noted on previous day. She was born at 39 wk. with weight of 3.29 kg but no neonatal problems, no liver enlargement and stool are pigmented. Yet weight was 3.10 kg on examination.**

**I. Diagnosis is most likely:**

- a. Rh incompatibility.
- b. ABO incompatibility.
- c. Physiological jaundice.
- d. Hypothyroidism.

Answer: c.

**II. How to explain weight loss:**

- a. Unable to feed.
- b. ↓breast milk.
- c. Due to jaundice.

d. Physiological.

Answer: d.

**6. Physiological jaundice appears at ... and disappears at ... day? (June 2010)**

- a. 1<sup>st</sup> – 3<sup>rd</sup> day.
- b. 5<sup>th</sup> – 9<sup>th</sup> day.
- c. 3<sup>rd</sup> – 7<sup>th</sup> day.
- d. 7<sup>th</sup> – 11<sup>th</sup> day.

Answer: c.

**7. Phototherapy:**

- a. Changes bilirubin to nontoxic isomer.
- b. Constipation is usually observed.
- c. Indicated for bilirubin > 25 mg % in full term.
- d. Feeding should stop during therapy.

Answer: a.

**8. Which is correct in kernicterus:**

- a. Can be prevented by blood transfusion.
- b. Bilirubin is deposited in hemisphere.
- c. Manifests since birth by neurological signs.
- d. Hemolysis of RBCs is a common risk factor.

Answer: d.

**9. A 6-week-old boy referred by neonatologist to hepatology clinic. Provisional diagnosis was prolonged neonatal jaundice. According to mother, it started at 3rd day of life. Urine became darker, stool is getting paler later and jaundice became more intense. On examination, liver became 4 cm below right costal margin, but not tender. Total bilirubin became 16 mg/dl (80% direct). (September 2014)**

**I. All the following can be expected, except:**

- a. Thiamine deficiency.
- b. Pruritus.
- c. Fat malabsorption.
- d. Progressive liver damage.

Answer: a.

**II. HIDA scan is used for:**

- a. Assessing liver function.
- b. Assessing liver size.
- c. Assessing dye delivery to intestine.
- d. Replacing percutaneous liver biopsy.

Answer: c.

**10. Which is correct about phototherapy: (September 2014)**

- a. Treatment of conjugated hyperbilirubinemia.
- b. Causes clay colored stool.
- c. Best therapy if serum bilirubin is (16-18 mg/dl) at day 1 of life.
- d. Eyes should be covered.

Answer: d.

**11. A 30-hour-old full-term infant has jaundice covering face & chest. He is breast fed & proved completely normal on examination except jaundice. His serum bilirubin is 15.5 mg/dl. (September 2008)**

**What is the best action to proceed for:**

- a. Start phototherapy.
- b. Discontinue breast milk.
- c. Wait and retest bilirubin after 6 hours.
- d. Start exchange transfusion.

Answer: a

**12. All are true in physiological neonatal jaundice, except: (2009)**

- a. Conjugated hyperbilirubinemia.
- b. Does not exceed 2 mg/dl.
- c. Baby looks well & feeds well.
- d. Does not persist more than 7 days.

Answer: a.

**13. A 7-day-old neonate presented to clinic with jaundice of 2 days ago. He was born by uneventful vaginal delivery and started breast milk after some delay. Bilirubin is 14 mg/dl, no drug intake history by mother. Jaundice is not improving and asks if he has kernicterus. (September 2010)**

**What is the most likely diagnosis:**

- a. Cephalohematoma.
- b. Breast feeding jaundice.
- c. Thalassemia.
- d. Kernicterus.

Answer: b.

**14. In kernicterus, which is correct: (June 2011)**

- a. More likely to occur if bilirubin exceeds 10 mg/dl in 1<sup>st</sup> day.
- b. Bilirubin is deposited mainly in hemispheres.
- c. More likely to occur in infant of Rh<sup>+</sup> mother.
- d. Extra hepatic biliary atresia is a common cause.

Answer: a.

**15. A suggestive sign of hemolysis in neonatal jaundice is:**

- a. Low T<sub>4</sub> of neonate.
- b. Mother group A, baby group O.
- c. Baby Rh-ve.
- d. Coombs positive.

Answer: d.

**16. A 42-wk-gestational age, 3.8 kg breast fed baby has persistent jaundice at 2nd week of life, hasn't gained weight since birth with hoarse cry, dry skin, hypotonia, hernia & 6 cm anterior fontanel.**

**I. Diagnosis is:**

- a. Hypothyroidism.
- b. Hereditary spherocytosis.
- c. Biliary atresia.

- d. Galactosemia.

Answer: a.

**II. Condition maybe prevented by:**

- a. Early exchange transfusion.
- b. Neonatal screening.
- c. Genetic counseling.
- d. Special milk formula.

Answer: b.

**17. A full-term baby had jaundice at 10 hours of age. Mother blood group was O negative and that of baby was A positive. 2 hours later, indirect bilirubin level was 16 mg/dl.**

**I. Best treatment is:**

- a. Exchange blood transfusion.
- b. Phototherapy.
- c. Phenobarbital.
- d. Ceftriaxone.

Answer: b.

**II. Main determinant of cause is:**

- a. Level of bilirubin.
- b. rate of rise.
- c. Baby sex.
- d. Jaundice onset.

Answer: d.

**18. Newborn was delivered after 37 weeks by cesarean section. He started to develop yellow discoloration of skin, sclera after 18 hours of delivery. Total serum bilirubin was 4 mg/dl at 24 hours and 15.3 mg/dl at 48 hours. Mother blood group O- and child O+. Big caput succedaneum was noticed.**

**I. Diagnosis is most likely:**

- a. Rh incompatibility.
- b. ABO incompatibility.
- c. Physiological jaundice.
- d. G6PD deficiency.

Answer: a.

**II. Treatment of choice is:**

- a. Reassure and observe.
- b. Phototherapy.
- c. Exchange transfusion.
- d. Oral phenobarbitone.

Answer: b.

**19. Surfactant production is accelerated in all of the following situations, except:**

- a. Premature rupture of membranes greater than 48 hours.
- b. Infants with erythroblastosis fetalis.
- c. Infants of mothers receiving steroids 48 hours prior to delivery.
- d. Infants suffering from placental insufficiency.

Answer: b.

**20. In which grade of respiratory distress grunting is heard:**

- a. Grade 1.
- b. Grade 2.
- c. Grade 3.
- d. Grade 4.

Answer: c.

**21. Patchy or streaky areas of lung collapse with areas of over-inflation are commonly seen in chest x-ray of a neonate with:**

- a. Pneumothorax.
- b. Congenital pneumonia.
- c. Meconium aspiration.
- d. Hyaline membrane disease.

Answer: c.

**22. Mature levels of surfactant are usually present after:**

- a. 20 weeks of gestation.
- b. 25 weeks of gestation.
- c. 30 weeks of gestation.
- d. 35 weeks of gestation.

Answer: d.

**23. In which grade of respiratory distress cyanosis appears:**

- a. Grade 1.
- b. Grade 2.
- c. Grade 3.
- d. Grade 4.

Answer: d.

**24. Reticulo-granular pattern and air bronchogram are the typical chest x-ray findings of a neonate with:**

- a. Hyaline membrane disease.
- b. Meconium aspiration.
- c. Pneumothorax.
- d. Congenital pneumonia.

Answer: a.

**25. Which of the following is not correct about hyaline membrane disease?**

- a. More common in preterm.
- b. More common in infants of diabetic mothers.
- c. More common in girls.
- d. More common in infants born by cesarean section.

Answer: c.

**26. Which of the following is correct about hyaline membrane disease?**

- a. It is common in post-term babies.
- b. X ray shows fine reticulogranular pattern.
- c. Prenatal diagnosis is not available.
- d. Respiratory alkalosis commonly occurs in such patient.

Answer: b.

**27. Which of the following is true about hyaline membrane disease?**

- a. Ground-glass appearance on chest x ray is common.
- b. The disease usually worsens 2-3 days after birth.
- c. Steroids reduce severity if given early to premature.
- d. Surfactant therapy is rarely useful.

Answer: a.

**28. 2-hour-old, 32-week-gestational age infant develops progressive cyanosis, grunting, nasal flaring, and chest retractions. The chest radiograph reveals a ground glass-air bronchogram pattern. The infant now requires oxygen therapy with continuous positive airway pressure to maintain adequate oxygenation.**

**I. The most likely diagnosis is:**

- a. Respiratory distress syndrome.
- b. Perinatal asphyxia.
- c. Congenital pneumonia.
- d. Pneumothorax.

Answer: a.

**II. One of the following is true about diagnosis:**

- a. Less common with maternal diabetes.
- b. X-ray findings are typically bilateral.
- c. Assisted ventilation is the only available therapy.
- d. Maternal antibiotics may decrease severity.

Answer: b.

**29. About hyaline membrane disease:**

- a. It is commonly started few hours after birth.
- b. X-ray shows unilateral lung opacity.
- c. Prenatal diagnosis is impossible.
- d. It is caused by aspiration of meconium.

Answer: a.

**30. An infant is born at 32 weeks of gestation weighing 1500 g. Respiratory difficulty develops immediately after birth and increases in intensity thereafter. At 6 hr of age, the infant's respiratory rate is 70/minute. Examination reveals grunting, retractions, and cyanosis in room air.**

**I. An expected chest x-ray finding is:**

- a. Hyperinflation.
- b. Lobar opacity.
- c. Interstitial infiltrate.
- d. Air bronchogram.

Answer: d.

**II. The most important clue(s) for diagnosis:**

- a. Gestational age.
- b. Onset of respiratory distress.
- c. Both.
- d. None.

Answer: c.

**31. A 3-day-old male newborn presents to the emergency room with increased temperature, lethargy, respiratory distress, and poor feeding for the past 24 hours. His mother had a prolonged rupture of membranes (30 hours). Examination reveals grunting respiration, chest in-drawing with decreased air entry. Radiologic examination shows patchy infiltrates of lungs and gastric dilatation. What is the most likely diagnosis:**

- a. Respiratory distress syndrome.
- b. Transient tachypnea of newborn.
- c. Pneumonia.
- d. Meconium aspiration.

Answer: c.

**32. Hemorrhagic disease of newborn is characterized by all of the following except:**

- a. Usually present around the age of 3 weeks
- b. The most common cause of bleeding in newborn
- c. GIT is among commonest sites of bleeding
- d. Better prevented by prophylactic vit K administered at delivery room

Answer: a

**33. Physiologic anemia of infancy usually noticed at:**

- a. 8:12 weeks
- b. 20:24 weeks
- c. 30:36 weeks
- d. Above 6 months

Answer: a

**34. In hemorrhagic disease of newborn, all of the following coagulation factors are reduced except:**

- a. Factor 2
- b. 5
- c. 7
- d. 10

Answer: b

**35. A 3-day-old term infant borne at home, exclusively breast-fed, presented with lethargy, bulging fontanel, and bright red blood from rectum. What most likely etiology?**

- a. Vit D deficiency
- b. K deficiency
- c. Ca deficiency
- d. Iron deficiency

Answer: b

**36. Which of the following is correct about hemorrhagic disease of the newborn?**

- a. Defective budding of megakaryocytes in bone marrow
- b. Bleeding time is prolonged → platelets غلط، لانه بيزيد في الأمراض المتعلقة بال platelets
- c. It may cause intracranial Hge
- d. Umbilical He is rare

Answer: c

**37. Which of the following is correct about hemorrhagic disease in newborn?**

- a. Platelet account decreased
- b. Bleeding time prolonged
- c. X-linked recessive
- d. Umbilicus is a common site of bleeding

Answer: d

**38. The most important causative agent of early neonatal sepsis:**

- a. Streptococcus pyogens
- b. Enterococci
- c. Streptococcus Algectosis
- d. Streptococcus Aureus

Answer: b

**39. Breast milk is imported as a cause of newborn disease in all of the following except;**

- a. Active mycobacterium tuberculosis
- b. Group B streptococci
- c. Cytomegalovirus
- d. Listeria monocytogenes

Answer: b

**40. A 2weeks old infant developed high fever, tachycardia RR 40, bulging anterior fontanel & vomiting what is the least action if you found no neck rigidity:**

- a. CSF examination
- b. IM antibiotic immediately
- c. CT brain
- d. Cranial US

Answer: b

**41. Sepsis in infant may produce:**

- a. Vomiting
- b. Diarrhea
- c. Hypothermia
- d. All of above

Answer: d

**42. Of the following statement about GBS in newborn one true EXCEPT;**

- a. It organism not sensitive to penicillin
- b. It usually colonizes in the maternal birth canal
- c. It is one of the most common causes of neonate sepsis
- d. The new born may show manifestation of meningitis or pneumonia

Answer: a

**43. In a newborn, the most common 1ry force of infection with oral moniliasis is**

- a. infected nipple
- b. maternal birth canal
- c. contaminated instrument
- d. contact with hospital carrier

Answer: b



**44. All are true about neonatal infections Except:**

- a. hypothermia
- b. jaundice
- c. depressed Moro reflex
- d. good suckling

Answer: d

**45. A false statement about cephalohematoma:**

- a. It is limited to the surface of one of cranial bone
- b. It is present shortly after birth
- c. Aspiration is the treatment of choice
- d. May lead to hypo bilirubinemia

Answer: c

**46. Caput succandum is characterized by all the following, Except:**

- a. no treatment needed
- b. it may extend overs the midline
- c. c)it never extent across the suture line
- d. Edema usually disappears within few days

Answer: c

**47. About cephalohematoma, which of the following statement is false**

- a. It is limited to the surface of one cranial bone
- b. No discoloration of the underlying skin.
- c. Noticed at birth
- d. Can cause hyperbilirubinemia

Answer: c

**48. Regarding head of a new born, which is true?**

- a. A cephalhematoma will resolve within the patient 24 hour of life
- b. caput is due to edema of the presenting part of the head
- c. cephalhematoma is due to bleeding into the skin
- d. cephalhematoma should be drained

Answer: b

**49. After difficult and complicated vaginal delivery, the pediatrician noted limited movement of the left arm with absent Moro's reflex on the left side. The baby developed repetitive seizures for which he was admitted to the NICU. On examination, the baby looked pale, the anterior fontanel was wide and tense. Hemoglobin was 8.2 gm/dl and oxygen saturation at room air was 96%**

**I. The signs in the upper limbs are suggestive of:**

- a. Right sided hemiplegia
- b. Right Erb's palsy
- c. Left sided hemiplegia
- d. Left Erb's palsy

Answer: c

**II. The most likely cause of these seizures is:**

- a. Hypoxic ischemic encephalopathy
- b. Intracranial hemorrhage

- c. Hypocalcemia
- d. Anemia

Answer: b

**50. To ensure successful breastfeeding for the healthy new born you need to encourage all of the following EXCEPT:**

- a. Rooming in
- b. Scheduled feeding
- c. Avoid the use of pacifiers
- d. Ensure perfect positioning of baby on the breast

Answer: b

**51. Regarding Erb's palsy, the following statements are true except:**

- a. Result from injury of the 5th cervical roots
- b. There is hypotonia of the affected upper limb
- c. It causes claw hand
- d. Need physiotherapy shortly after birth.

Answer: c

**52. Causes of early neonatal hypocalcemia (3days of life) include the following except:**

- a. Hypoparathyroidism
- b. Prematurity
- c. Infant of diabetic mother
- d. Birth asphyxia

Answer: a

**53. Which of the following is correct about kernicterus?**

- a. Bilirubin is deposited mainly in cerebral hemispheres.
- b. Can be prevented by proper management.
- c. It is caused by early neonatal cyanosis.
- d. Extra-hepatic biliary atresia is a common cause.

Answer: b

**54. Which of the following is wrong about neonatal apnea?**

- a. Almost all newborns below 35 weeks of gestation develop apnea.
- b. It is defined as cessation of respiration for more than 20 seconds.
- c. It may be accompanied by bradycardia.
- d. An apneic spell in the full-term infant is always abnormal.

Answer: a

**55. Apnea in the neonate is defined as cessation of breathing for longer than:**

- a. 10 seconds
- b. 20 seconds
- c. 30 seconds
- d. 40 seconds

Answer: b

**56. Regarding Hemolytic disease of newborn caused by Rh incompatibility which of the following is not true:**

- a. It is more common but less severe than ABO incompatibility.
- b. Seen only in Rh +ve infants born to Rh -ve mothers.
- c. Clinically, there is anemia and jaundice of variable severities.
- d. It is an iso-immune hemolytic disease.

Answer: a

**57. A major recognized problem for small for date full term neonates:**

- a. Sepsis
- b. Jaundice
- c. Hypothermia
- d. Hyaline membrane disease

Answer: c

**58.**

**I. You are called to attend the delivery of a boy at 42 weeks GA with thick meconium-stained fluid and type II decelerations. The obstetrician rapidly delivers the baby and hands him to you. The boy is hypotonic cyanotic, apneic and bradycardic.**

- a. Stimulate the infant to breath.
- b. Administer epinephrine.
- c. Provide positive-pressure bag-and-mask ventilation.
- d. Intubate and apply negative-pressure suction.

Answer: d

**II. After performing all measures for resuscitation for 10 minutes the baby showed improvement of tone and color, but still having tachypnea with RR of 80/min and a HR of 160 BPM. You refer to the NICU for the following possible complications except:**

- a. Hypoxic-ischemic encephalopathy.
- b. Meconium aspiration syndrome.
- c. Air leak syndrome (e.g. pneumothorax)
- d. Oxygen toxicity.

Answer: d

**59. Cause of neonatal seizures:**

- a. hypothermia
- b. birth asphyxia
- c. cephalhematoma
- d. vit B12 deficiency

Answer: b.

**60. Serum values that can cause neonatal seizures:**

- a. bicarbonate level of 22 mEq/L
- b.  $\text{Ca}^{+2} < 6.2 \text{ mg/dL}$
- c. glucose  $< 45 \text{ mg/dL}$
- d.  $\text{Na}^+ < 138 \text{ mEq/dL}$

Answer: b.

# Cardiology

---

## MCQ:

---

**1. Ostium secundum defect is characterized by:**

- a. Left ventricular hypertrophy.
- b. Heart failure is a common complication in early childhood.
- c. Symptoms usually appear since birth.
- d. Wide fixed splitting of 2<sup>nd</sup> sound.

Answer: d.

**2. In patent ductus arteriosus (PDA), which of the following is not correct:**

- a. A machinery murmur is heard.
- b. Eisenmenger's syndrome can be a late complication.
- c. It causes left to right shunting of blood.
- d. Is induced to close by high levels of prostaglandins.

Answer: d.

**3. In persistent ductus arteriosus, which of the following is correct:**

- a. Undergoes anatomic closure within 24 hours of birth.
- b. Causes cyanosis in the 1<sup>st</sup> week of life.
- c. Induced to close by high levels of prostaglandins.
- d. Eisenmenger syndrome can be a late complication.

Answer: d.

**4. The murmur heard in a child with persistent ductus arteriosus is:**

- a. Mid-diastolic murmur.
- b. Ejection systolic murmur.
- c. Pan systolic murmur.
- d. Machinery murmur.

Answer: d.

**5. Ostium secundum defect is characterized by all the following, except:**

- a. Narrow, fixed splitting of the 2<sup>nd</sup> sound.
- b. The treatment of choice is device closure when possible.
- c. Symptoms are unusual in infancy.
- d. Echocardiography often reveals right atrial and ventricular dilation.

Answer: a.

**6. In the full term infant, the term persistent ductus arteriosus is used if the ductus has failed to close by:**

- a. 10 hours of age.
- b. 3 days of age.
- c. 1 week of age.
- d. 1 month of age.

Answer: d.

7. A 1-year-old girl has a history of tachypnea, tiredness, and frequent episodes of respiratory infections. On examination, the 2<sup>nd</sup> heart sound in the 2<sup>nd</sup> left intercostal space is accentuated and there is a harsh systolic-diastolic murmur in the 2<sup>nd</sup> left intercostal space and below the clavicle, similar to a "machine noise".

**A. What is the most probable diagnosis:**

- a. PDA.
- b. Aortic stenosis.
- c. ASD.
- d. VSD.

Answer: a.

**B. One of the following is true:**

- a. The condition is more common in boys.
- b. Corrective treatment should be done early.
- c. Hypercyanotic spells are common.
- d. Femoral pulses cannot be felt.

Answer: b.

**8. Small VSD (up to 3 mm) is characterized by:**

- a. Barely audible pan systolic murmur.
- b. Loud pulmonary second sound.
- c. May be asymptomatic.
- d. Wide QRS complex in ECG.

Answer: c.

**9. Which of the following is true about Eisenmenger syndrome?**

- a. Usually a primary congenital cyanotic heart disease.
- b. Considered a high indication for surgery in a baby with congenital heart disease.
- c. Represents a serious complication of non-cyanotic heart disease.
- d. Pulmonary hypertension is not always present.

Answer: c.

**10. Prevention of rheumatic fever includes all the following, except:**

- a. Accurate treatment of acute tonsillitis in children.
- b. Antistreptococcal vaccine.
- c. Intramuscular penicillin for children with rheumatic heart disease every 3 weeks.
- d. Community eradication of streptococcal infection.

Answer: b.

**11. Which of the following presentations suggest diagnosis of rheumatic fever:**

- a. Arthralgia with fever.
- b. Carditis with arthralgia and fever.
- c. Chronic recurrent tonsillitis with high ESR.
- d. Arthralgia with prolonged PR interval.

Answer: b.

**12. Important complication of a VSD include:**

- a. Hyper-cyanotic spells.
- b. Cardiac failure at birth.
- c. Pulmonary hypertension.

- d. Intellectual impairment.

Answer: c.

**13. One of the following is NOT a feature of VSD:**

- a. The commonest congenital heart anomaly.
- b. Prophylactic antibiotics are not needed for small VSD prior to surgery.
- c. The diagnostic murmur is pan systolic over left lower sternal border.
- d. Pulmonary pressure is a major determinant of surgical treatment.

Answer: b.

**14. Which of the following is a major manifestation of rheumatic fever:**

- a. Erythema nodosum.
- b. Arthralgia.
- c. Previous rheumatic fever.
- d. Subcutaneous nodules.

Answer: d.

**15. Major Jones criteria include all of the following, except:**

- a. Carditis.
- b. Arthralgia.
- c. Chorea.
- d. Subcutaneous nodules.

Answer: b.

**16. Which of the following is not true about rheumatic chorea:**

- a. Commoner in females.
- b. Early onset manifestation.
- c. Emotional liability is common.
- d. Spontaneous recovery occurs.

Answer: b.

**17. The natural course of untreated ventricular septal defects includes all except:**

- a. Development of pulmonary hypertension.
- b. Infective endocarditis
- c. Spontaneous closure of defect
- d. Pressure load to left ventricle.

Answer: d.

**18. Which of the following is wrong about infective endocarditis:**

- a. Splenomegaly may occur.
- b. Clubbing is one of the earliest manifestations.
- c. Changing cardiac signs may occur.
- d. Pallor is a common associated finding.

Answer: b.

**19. Transposition of great arteries:**

- a. Means that there are two parallel circulations.
- b. Usually develops hypercyanotic spells.
- c. Develops cyanosis after the 1<sup>st</sup> month of birth.
- d. Usually presented with pansystolic murmur.

Answer: a.

**20. A 10-year-old girl presents with the complaint of sudden, aimless, irregular movements of her arms, a raised wavy rash over the trunk, and fleeting polyarthritides. She had sore throat 3 weeks ago.**

**I. Which of the following is true about her condition:**

- a. Does not affect the heart.
- b. The rash is called erythema nodosum.
- c. The condition is due to exotoxin.
- d. Usually involves small joints.
- e. It is usually associated with emotional liability.

Answer: e.

**II. Drug therapy of this girl should include:**

- a. Salicylates.
- b. Oral prednisolone.
- c. Cyclophosphamide.
- d. Haloperidol.

Answer: d.

**21. A 6-year-old female with history of congenital heart disease presents after a dental procedure with a complaint of fever, myalgia, and generalized weakness. Examination reveals mild splenomegaly and petechiae.**

**I. In this case:**

- a. Etiology is mostly viral.
- b. Lymphadenopathy is a common finding.
- c. Echocardiography may show diagnostic features.
- d. Antibiotic therapy is usually needed for 7-10 days.

Answer: c.

**II. What is the most likely diagnosis:**

- a. Infective endocarditis.
- b. Acute leukemia.
- c. Systemic lupus erythematosus.
- d. Non Hodgkin lymphoma.

Answer: a.

**III. One of the following is true about diagnosis:**

- a. The predominant organism is H. influenza.
- b. Embolic manifestations don't occur.
- c. Echocardiography is very helpful.
- d. Antibiotics are usually given for 7-10 days.

Answer: c.

**22. Transposition of great arteries is characterized by one of the following:**

- a. Delayed onset of cyanosis.
- b. Frequent cyanotic spells.
- c. Heart failure is common.
- d. Ejection systolic murmur propagated to the neck.

Answer: c.

**23. A 2-month-old female infant, born at full term, is noted to have a harsh holo systolic heart murmur heard best at the left lower sternal border. The infant is not cyanotic and does not have hepatomegaly or tachypnea at rest. She feeds without tachypnea or diaphoresis, and weight gain is appropriate. There is no cardiomegaly on chest radiograph. Which of the following is the most likely diagnosis?**

- a. VSD.
- b. ASD.
- c. Fallot's tetralogy.
- d. Patent ductus arteriosus.

Answer: a.

**24. A 3-year old boy is seen by a pediatrician for a chest infection. During examination, a loud systolic murmur is heard. It is loudest at the left sternal edge. The boy's mother reports that he is under follow up with a cardiologist for his murmur and that no treatment is required as it is likely to resolve. What is the most likely diagnosis?**

- a. Ventricular septal defect.
- b. Atrial septal defect.
- c. Aortic stenosis.
- d. Tetralogy of Fallot.

Answer: a.

**25. A cardiac murmur is considered significant (as opposed to innocent) if any of the following is true, except:**

- a. It is accompanied with a thrill.
- b. It is heard all over the precordium.
- c. It is mostly on the upper sternal border.
- d. It is diastolic.

Answer: c.

**26. A 5-week-old female infant was referred to hospital because of poor feeding and poor weight gain during the previous 2 weeks. Before this, she had been well on examination she was tachypneic and having intercostal recessions. There was a thrill, and a loud pan systolic murmur at the lower left sternal edge. The chest X-ray showed cardiomegaly and increased pulmonary vascular markings.**

**I. What is the most likely diagnosis?**

- a. VSD.
- b. Coarctation of the aorta.
- c. Tetralogy of Fallot.
- d. ASD.

Answer: a.

**II. One of the following is false about this diagnosis:**

- a. Diuretics and Captopril are useful treatment.
- b. Cyanosis may develop in organic untreated cases.
- c. Spontaneous closure is rare.
- d. Endocarditis prophylaxis is essential.

Answer: c.



**27. The following conditions are associated with a systolic murmur, except:**

- a. Anemia.
- b. Aortic incompetence.
- c. Mitral incompetence.
- d. Fever.

Answer: b.

**28. A Two-day old male is referred for evaluation of a heart murmur. The baby was born at 37 weeks' gestation to 39 year woman. He has a flat facial profile; short up slanting palpebral fissure; a small mouth with protruding tongue.**

**I. The diagnostic tool which confirms the diagnosis is:**

- a. Chest X-ray.
- b. Karyotyping.
- c. Serum alpha-fetoprotein.
- d. ECG.

Answer: b.

**II. The most common cardiac defect in such a case is:**

- a. Endocardial cushion defect.
- b. Coarctation of the aorta.
- c. Pulmonary stenosis.
- d. Aortic Stenosis.

Answer: a.

**29. One of the following is correct about congenital valvular aortic stenosis:**

- a. It may be associated with bicuspid aortic valve.
- b. Bacterial endocarditis is a rare complication.
- c. The systolic murmur propagates to the axilla.
- d. The 2nd aortic sound is usually loud.

Answer: a.

**30. All the following are seen in patients with coarctation of the aorta except:**

- a. Radio-femoral delay.
- b. Pan systolic murmur at upper sternal border.
- c. Systemic hypertension in right arm.
- d. ECG finding of the ventricular hypertrophy.

Answer: b.

**31. All of the following are features of coarctation of the aorta, except:**

- a. Systemic hypertension in the right arm.
- b. Absent or weak femoral pulses.
- c. ECG shows right ventricular hypertrophy.
- d. Ejection systolic murmur at upper left sternal border.

Answer: c.

**32. A 10 year old boy applying to join the school's football team. He has a history of a heart murmur as an infant, but he thought it would go away. During the match, he experiences severe dyspnea and becomes light-headed (dizzy). On examination 1 hour later, he has a normal rhythm, pulse and blood pressure and is no longer dizzy. There is a grade 4/6 systolic ejection murmur that radiates to the neck. There is also an ejection click. An ECG reveals left ventricular hypertrophy.**

**I. The next step in his management should be:**

- a. Chest X-ray.
- b. Exercise test.
- c. Digitalization.
- d. Echocardiography.

Answer: d.

**II. What is the most likely diagnosis:**

- a. Aortic stenosis.
- b. PDA.
- c. ASD.
- d. VSD.

Answer: a.

**33. About Fallot's tetralogy:**

- a. The most common congenital heart disease.
- b. Valvular pulmonary stenosis is classic.
- c. Iron therapy is contraindicated.
- d. Squatting increases pulmonary blood flow.

Answer: d.

**34. A 2 month old infant was noted at birth to have an upper left sternal border ejection murmur. The infant at that time was not cyanotic, but slowly developed cyanosis over the next 2 months. An ECG showed right axis deviation and right ventricular hypertrophy. A chest X-ray film showed a small heart with a concave main pulmonary artery segment and diminished pulmonary blood flow.**

**I. The most likely diagnosis is:**

- a. Pulmonary stenosis.
- b. Transposition of great arteries.
- c. Atrial septal defect.
- d. Tetralogy of Fallot.

Answer: d.

**II. The least likely useful drug is:**

- a. Propranolol.
- b. Morphine.
- c. Phenylephrine.
- d. Furosemide.

Answer: d.

**35. The onset of cyanosis in a patient with tetralogy of Fallot is usually delayed till:**

- a. 3 weeks of age.
- b. 6 weeks of age.
- c. 3 months of age.
- d. 6 months of age.

Answer: c.

**36. Drugs used to treat cyanotic spells in Fallot's tetralogy include all of the following, except:**

- a. Oxygen.
- b. Propranolol (Inderal).
- c. Morphine.
- d. Digitalis (Digoxin).

Answer: d.

**37. A newborn infant with a marked congenital cyanotic heart defect with decreased pulmonary vascularity should be treated with:**

- a. Dopamine.
- b. Prostaglandin E<sub>1</sub>.
- c. Digoxin.
- d. Indomethacin.

Answer: b.

**38. A 2-week-old baby brought to the pediatric cardiologist for being bluish from day 1 of his birth. On examination, the baby shows central cyanosis that couldn't be corrected even with 100% oxygen. A pan systolic murmur is heard all over the precordium, mainly on the left parasternal area. The heart rate is 180/min. The liver is enlarged & tender. Chest x-ray showed an egg-shaped heart with narrow pedicle.**

**I. The most likely diagnosis is:**

- a. Fallot's tetralogy.
- b. Single ventricle.
- c. Truncus arteriosus.
- d. Transposition of great arteries (TGA).

Answer: d.

**II. Transposition of great arteries is characterized by all, except:**

- a. Progressive cyanosis since birth.
- b. Frequent cyanotic spells.
- c. Heart failure is common.
- d. Usually no audible murmur.

Answer: b.

**III. Which of the following is not expected in this baby:**

- a. Right axis deviation in ECG.
- b. Hypercyanotic spells.
- c. Right to left shunting of blood.
- d. Heart failure.

Answer: b.

**39. Rheumatic carditis is characterized by:**

- a. Shorter P-R interval on ECG.
- b. Apical high-pitched, early diastolic murmur.
- c. Decrescendo systolic murmur along the left sternal border (aortic murmur).
- d. Tachycardia disproportionate to the degree of fever.

Answer: d.

**40. The dose of Aspirin in the 1<sup>st</sup> 2 weeks of treatment of rheumatic arthritis is:**

- a. 5-10 mg/kg/day.
- b. 30-40 mg/kg/day.
- c. 60 mg/kg/day.
- d. 100 mg/kg/day.

Answer: d.

**41. Rheumatic endocarditis:**

- a. May lead to heart failure due to endocardial involvement.
- b. Pulmonary valve is commonly affected.
- c. Prevalence is in 50% of cases of rheumatic fever.
- d. Tachycardia correlated to fever.

Answer: c.

**42. Diagnosis of rheumatic fever is best when child is with high ASO titer and:**

- a. Polyarthrititis, arthralgia.
- b. Carditis, arthralgia, epistaxis.
- c. Subcutaneous nodules.
- d. Erythema marginatum.

Answer: b.

**43. All are true about rheumatic chorea, except:**

- a. More in females.
- b. Acute phase reactant usually normal.
- c. Involvement of cerebellum & results in hypotonia.
- d. Increases on sleep & decreases on awaking.

Answer: d.

**44. In rheumatic fever, all are true, except:**

- a. Pancarditis is present.
- b. Myocarditis is less common than endocarditis.
- c. Rt. side valvular involvement is uncommon.
- d. Echocardiography with regurge = sufficient for Jones' criteria.

Answer: d.

**45. Rheumatic fever may complicate:**

- a. Tonsillitis.
- b. Scarlet fever.
- c. Both a & b.
- d. Impetigo.

Answer: c.

**46. In rheumatic fever:**

- a. ESR is normal.
- b. Long acting penicillin given for life per certain cases.
- c. Rheumatic arthritis is treated by salicylates for 4 weeks.
- d. Cortisone is started at any rheumatic activity.

Answer: b.

**47. Which murmur denotes active carditis:**

- a. Carey coombs.
- b. Mid diastolic.
- c. Pan systolic.
- d. Machinery.

Answer: a.

**48. Rheumatic fever is suggested by:**

- a. Symmetrical polyarthritis.
- b. Anemia.
- c. Clubbing.
- d. ECG changes.

Answer: d.

**NB. Arthritis is asymmetrical in Rheumatic fever.**

**49. Rheumatic fever manifestations are all, except:**

- a. Cutaneous nodules.
- b. Chorea.
- c. Epistaxis.
- d. Erythema marginatum.

Answer: a.

**50. One of the following is true about rheumatic chorea:**

- a. More common in males.
- b. An early-onset manifestation of rheumatic fever.
- c. Emotional liability is common.
- d. Spontaneous recovery never occurs.

Answer: c.

**51. The Carey Coomb murmur is due to:**

- a. Inflammation of mitral valve.
- b. Increased diastolic flow across mitral valve.
- c. Cardiac decompression.
- d. Defibrillation.

Answer: a.

**52. A case of arthritis & Carey Coombs murmur, best investigation is:**

- a. Echo.
- b. ECG.
- c. X-ray.
- d. None of the above.

Answer: a.

**53. Rheumatic arthritis is characterized by:**

- a. Fleeting in nature.
- b. Big joints affection early, then fleet to small joints.
- c. Normal ESR.
- d. Dramatic response to salicylates within 3 weeks.

Answer: a.

**54. According to the revised Jones criteria for the diagnosis of rheumatic fever, all of the following are minor manifestations, except:**

- a. Fever.
- b. Arthralgia.
- c. Previous rheumatic fever.
- d. High ASO (Antistreptolysin O) titer.

Answer: d.

**55. All are recognized minor criteria for diagnosis of rheumatic fever, except:**

- a. Fever.
- b. Arthralgia.
- c. Leukocytosis.
- d. Positive throat culture.

Answer: d.

**56. A mid diastolic rumbling murmur with presystolic accentuation is heard in:**

- a. Mitral stenosis.
- b. Mitral regurge.
- c. Aortic stenosis.
- d. Aortic regurge.

Answer: a.

**57. According to the modified Duke criteria for the diagnosis of infective endocarditis, all of the following is minor manifestation except:**

- a. Positive echocardiographic finding with new valvular regurgitation.
- b. Predisposition e.g. congenital heart disease or history of IV drug use.
- c. Immunologic phenomena e.g. glomerulonephritis & Osler nodes.
- d. Fever with a temperature of more than 38°C.

Answer: a.

**58. A 5 year old boy repeatedly visited his paediatrician complaining of difficulty initiating sleep, daytime tiredness and headache. During the frequent visits, the doctor records show normal chest and heart examination, normal temperature, heart rates and respiratory rates for age and gender. The femoral pulse was felt well on both sides. There was no radio-femoral delay. A battery of investigations was done, namely CBC, fasting blood sugar, BUN and serum creatinine, liver functions, serum electrolytes, urine analysis and culture; all were normal. ECG was done and showed left ventricular hypertrophy. Ophthalmologic evaluation showed no abnormalities.**

**I. What important item was missed in the doctor's records?**

- a. The blood pressure.
- b. Oxygen saturation.
- c. Lipid profile.

- d. Results of ENT examination.

Answer: a.

**II. The current condition can be caused by all of the following, except:**

- a. Renal artery stenosis.
- b. Coarctation of the aorta.
- c. Essential hypertension.
- d. Pheochromocytoma.

Answer: b.

**59. All of the following can be found in infective endocarditis except:**

- a. Painless haemorrhage lesions on palm and soles.
- b. Negative blood culture.
- c. Haemorrhagic pericardial effusion.
- d. Arterial emboli.

Answer: c.

**60. Tetralogy of Fallot is characterized by all of the following, except:**

- a. Cyanosis always present at birth.
- b. Infundibular pulmonary stenosis.
- c. Overriding aorta.
- d. Right ventricular hypertrophy.

Answer: a.

**61. An innocent murmur is characterized by:**

- a. Harsh murmur.
- b. Mostly systolic.
- c. It is loud one (of grade 3/6).
- d. Appearance of clinical syndrome only with exertion.

Answer: b.

**62. Innocent murmur is characterized by:**

- a. Accompanied with a thrill.
- b. Mostly systolic.
- c. Heard all over the precordium.
- d. Gives symptoms only on exertion.

Answer: b.

**63. A 8-month-old girl presented to the ER with tachycardia, tachypnea & poor feeding for 3 months. Physical examination revealed a continuous machinery murmur and a wide pulse pressure with prominent apical impulse.**

**I. The most likely diagnosis is:**

- a. VSD.
- b. ASD.
- c. PDA.
- d. TGA.

Answer: c.

**II. Which of the following is not expected in this baby:**

- a. Cardiomegaly.
- b. Clubbing.
- c. Left to right shunt.
- d. Recurrent chest infections.

Answer: b.

**64. The murmur heard in a child with ventricular septal defect (VSD) is:**

- a. Mid-diastolic murmur.
- b. Ejection systolic murmur.
- c. Pan systolic murmur.
- d. Machinery murmur.

Answer: c.

**65. The following are causes of pediatric hypertension, except:**

- a. Renal artery stenosis.
- b. Aortic stenosis.
- c. Coarctation of the aorta.
- d. Cushing syndrome.

Answer: b.

**66. A 9 old boy presented to the ER with severe cyanosis. According to the mother, the bluish color was present at birth and steadily increased since then. She says that the doctors ordered an Echocardiography on day 3 and said that her baby has 2 parallel circulations, one is blue and one is red.**

**I. The diagnosis made for this baby was:**

- a. Fallot's tetralogy.
- b. TGA.
- c. Pulmonary stenosis.
- d. VSD.

Answer: b.

**II. The most important measure now is:**

- a. Immediate prostaglandin infusion and arrange for balloon atrial septostomy.
- b. Immediate infusion of indomethacin.
- c. IV beta blocker e.g. Inderal.
- d. IV steroids.

Answer: a.

**67. A 4-month-old girl is presented with poor feeding for 2 months. The mother noticed respiratory distress that was developing and increasing over the last few days. Physical examination revealed tachycardia, tachypnea & ejection systolic murmur heard on the left parasternal area and over the back. Femoral pulses on both sides were not palpable.**

**I. The most likely diagnosis is:**

- a. VSD.
- b. ASD.
- c. PDA.
- d. Coarctation of aorta.

Answer: d.



**II. Which cardiac chamber is hypertrophied:**

- a. Right ventricle.
- b. Left ventricle.
- c. Right atrium.
- d. Left atrium.

Answer: b.

**68. During a routine visit to the pediatrician, a 2-year-old boy was found to have an ejection systolic murmur at upper left sternal border. Detailed evaluation revealed systemic hypertension in right arm as well as weak femoral pulse.**

**I. The ECG is expected to show:**

- a. Left ventricular hypertrophy.
- b. Right ventricular hypertrophy.
- c. Left atrial hypertrophy.
- d. Right atrial hypertrophy.

Answer: a.

**II. The most likely diagnosis is:**

- a. PDA.
- b. Congenital mitral stenosis.
- c. Congenital aortic stenosis.
- d. Coarctation of aorta.

Answer: d.

**69. A 9-year-old boy presents with fever and joint pains. Initially, the pain affected right wrist, but now affects his left wrist and right ankle. He had tonsillitis 4 weeks previously. On examination, there are weak heart sounds and a systolic murmur at the left sternal edge. His left wrist and right ankle are tender and swollen. His ESR is 95 mm/hr and ASOT is 800 IU.**

**I. What is the most likely diagnosis:**

- a. Acute rheumatic fever.
- b. Viral myocarditis.
- c. Henoch-Schonlein disease.
- d. Septic arthritis.

Answer: a.

**II. What is the appropriate line of therapy:**

- a. Broad spectrum antibiotics.
- b. Ibuprofen.
- c. Steroids.
- d. Immunoglobulins.

Answer: c.

# Haematology

---

## MCQ:

---

**1. Ankylostoma anemia is due to:**

- a. Iron deficiency.
- b. Red cell hypoplasia in the bone marrow.
- c. Shortening of the red cell life span.
- d. Associated infection.

Answer: a.

**2. All the following can be a feature of G6PD deficiency, except:**

- a. Could be of a cause of neonatal jaundice.
- b. Urine can be reddish in severe cases.
- c. Hemolysis may be due to ingestion of certain food.
- d. Autosomal recessive disorder.

Answer: d.

**3. Hemophilia A is characterized by:**

- a. It's an X-linked dominant disorder.
- b. Circumcision may endanger life.
- c. Decreased activity of factor X.
- d. Abnormal bleeding time.

Answer: b.

**4. Iron deficiency anemia is characterized by all the following, except:**

- a. Low serum iron.
- b. Pica.
- c. Low serum free transferrin.
- d. Caused by low iron content in cow milk fed babies.

Answer: c.

**5. Hemophilia A is characterized by only one of the following:**

- a. Decreased activity of factor VIII.
- b. An autosomal dominant disease.
- c. Less common than hemophilia B.
- d. Normal partial thromboplastin time.

Answer: a.

**6. In aplastic anemia, which of the following statements is not correct:**

- a. Anemia and purpura are the main findings.
- b. Fever and evidence of infections maybe present.
- c. Splenomegaly is rather common.
- d. CBC shows pancytopenia.

Answer: c.

**7. Evidences of chronic hemolysis include all the following, except:**

- a. Low hemoglobin.
- b. High serum iron.
- c. Low iron binding capacity.
- d. Low serum ferritin.

Answer: d.

**8. Characteristic lab findings of iron deficiency anemia are all, except:**

- a. Low MCV.
- b. Low serum iron.
- c. High serum ferritin.
- d. High iron binding capacity.

Answer: c.

**9. Phase 1 of coagulation cascade is tested by:**

- a. PTT.
- b. PT.
- c. TT.
- d. Platelet count.

Answer: a.

*Phase 1: PTT.*

*Phase 2: PT.*

*Phase 3: TT.*

**10. In iron metabolism, all the following statements are correct, except:**

- a. Iron is absorbed more efficiently from human milk more than cow milk.
- b. Iron is absorbed in ferric form by mucosal cells of duodenum.
- c. When apoferritin is fully saturated with iron, further iron absorption stops.
- d. Serum ferritin is low in iron deficiency anemia.

Answer: b.

**11. The main site of hemopoiesis from 2-7 months of fetal life is:**

- a. Yolk sac.
- b. Liver.
- c. Spleen.
- d. Bone marrow.

Answer: b.

*1<sup>st</sup> 2 months (intrauterine): yolk sac.*

*2-7 months (intrauterine): liver.*

*Bone marrow starts at 5<sup>th</sup> month (intrauterine) and takes over after birth.*

**12. In beta thalassemia major, which of the following statements is not correct:**

- a. Autosomal recessive disorder.
- b. Spleen is always enlarged and can be huge.
- c. Hemoglobin electrophoresis shows elevated hemoglobin F (10-90%) and hemoglobin A2 (7-15%).
- d. Anemia is microcytic hypochromic.

Answer: c.

**13. The dose of oral iron when used to treat a child with iron deficiency anemia is:**

- a. 6 mg of elemental iron/Kg/day.
- b. 16 mg of elemental iron/Kg/day.
- c. 20 mg of elemental iron/Kg/day.
- d. 40 mg of elemental iron/Kg/day.

Answer: a.

**14. On a routine well-child examination, a 1-year-old boy is noted to be pale. He is in the 75<sup>th</sup> percentile for weight and 25<sup>th</sup> percentile for length. Results of physical examination are otherwise normal. Lab results reveal that hemoglobin is 8 g/dl, hypochromia and microcytosis.**

**What is the most appropriate treatment:**

- a. Blood transfusion.
- b. Oral iron therapy.
- c. Parenteral iron therapy.
- d. Increase milk intake.

Answer: b.

**15. A 6-year-old girl presented to hematology clinic because of significant pallor. On examination, this girl had many petechiae on her skin. CBC showed total WBC count of 950/mm<sup>3</sup>, hemoglobin of 6 gm/dl and platelet count of 20,000/mm<sup>3</sup>. The spleen was not enlarged. The mother attributed her weakness to the many antibiotics she received for recurrent throat infections.**

*Normal WBCs count is 4,500 to 11,000/mm<sup>3</sup>.*

**I. The most likely diagnosis is:**

- a. Immune thrombocytopenic purpura.
- b. Acute leukemia.
- c. Aplastic anemia.
- d. Systemic lupus erythematosus.

Answer: c.

**II. The anemia is expected to be:**

- a. Normocytic normochromic.
- b. Microcytic hypochromic.
- c. Macrocytic hyperchromic.
- d. Macrocytic hypochromic.

Answer: a.

**16. The mode of inheritance of hereditary spherocytosis is:**

- a. Autosomal dominant.
- b. Autosomal recessive.
- c. X-linked dominant.
- d. X-linked recessive.

Answer: a.

**17. In aplastic anemia, which of the following statements is correct:**

- a. Anemia is usually microcytic hypochromic.
- b. Leukocytosis is rather common.
- c. Splenomegaly is rather common.

- d. CBC shows pancytopenia.

Answer: d.

**18. All the following are true about congenital spherocytosis, except:**

- a. Transmitted as an autosomal dominant trait.
- b. Hb electrophoresis is best tool to diagnose.
- c. It can manifest in neonatal period.
- d. Examination often reveals splenomegaly.

Answer: b.

**19. A 5-year-old boy was referred to hematology clinic with provisional diagnosis by his GP as having G6PD deficiency. After lab evaluation, the mother was told that he had beta thalassemia major.**

**I. G6PD deficiency was excluded because:**

- a. Enzyme assay was normal.
- b. Osmotic fragility was normal.
- c. Haemoglobin A was normal.
- d. Serum iron was high.

Answer: a.

**II. The diagnosis of beta thalassemia major was confirmed because:**

- a. Anemia was microcytic hypochromic.
- b. Reticulocytic count was high.
- c. HbF was high.
- d. Serum iron was high.

Answer: c.

**20. A 4-year-old boy referred to a pediatric rheumatologist with provisional diagnosis of juvenile rheumatoid arthritis. He was asked to do CBC, showed significant anemia and Hb electrophoresis, which was diagnostic.**

**I. What is the diagnosis:**

- a. B-thalassemia major.
- b. Sick cell anemia.
- c. Hb C disease
- d. Acute lymphocytic leukemia.

Answer: b.

**II. Pain in hand & feet due to:**

- a. Vascular occlusion.
- b. Severe anaemia.
- c. Concomitant vit D deficiencies.
- d. Sequestration crisis.

Answer: a.

**21. Physiologic anemia of infancy is usually noticed at:**

- a. 8-12 weeks of age.
- b. 20-24 weeks of age.
- c. 30-36 weeks of age.
- d. Above the age of 6 months.

Answer: a.

**22. Phase 2 of coagulation cascade is assessed by:**

- a. Partial thromboplastin time (PTT).
- b. Prothrombin time (PT).
- c. Thrombin time (TT).
- d. Platelet count.

Answer: b.

**23. Hemolytic anaemia characterized by all except:**

- a. Anaemia unresponsive to iron therapy.
- b. Presence of Hb in urine, during acute attack.
- c. Increased Reticulocytic count.
- d. Direct hyperbilirubinemia is the main presentation.

Answer: d.

**24. A male neonate developed severe bleeding after circumcision which was done at age of 3 days. On examination, the baby looked markedly pale, with respiratory distress, tachycardia and hypotension. The capillary refill time was 6 seconds. CBC was normal apart from haemoglobin of 5 gm/dl. PTT was 67 seconds, PT was 11 seconds and TT was 15 seconds. Factor VIII assay was 4% of normal.**

**I. The patient is suffering from:**

- a. Hemophilia A.
- b. Hemophilia B.
- c. Von Willebrand disease.
- d. Thrombopoietin deficiency.

Answer: a.

**II. Factor VIII assay shows that the degree of severity in this patient is:**

- a. Mild.
- b. Moderate.
- c. Severe.
- d. Very severe.

Answer: b.

**25. A 5-year-old boy was referred to hematology clinic with provisional diagnosis from his GP as having beta thalassemia major. After lab evaluation, the mother was told that he had G6PD deficiency.**

**I. Beta thalassemia was excluded because:**

- a. Anemia was microcytic hypochromic.
- b. Reticulocytic count was high.
- c. HbF was normal.
- d. Serum iron was high.

Answer: c.

**II. Which of the following can precipitate attacks of hemolysis in this child?**

- a. Fava beans.
- b. Sulphonamides.
- c. High dose of aspirin.
- d. All of the above.

Answer: d.

**26. A previously well 4-year-old was brought to hospital because his parents noticed that his eyes looked yellow. He has recently been treated with trimethoprim-sulfamethoxazole for a urinary tract infection. His haemoglobin is 7.1 gm/dl. What investigation is the most likely to provide a diagnosis?**

- a. Hemoglobin electrophoresis.
- b. Liver function tests.
- c. G6PD assay.
- d. Osmotic fragility test.

Answer: c.

**27. Iron deficiency anemia is characterized by all, except:**

- a. High total iron binding capacity.
- b. Low serum ferritin.
- c. Macrocytic hypochromic anemia.
- d. Low serum iron.

Answer: c.

**28. A 5-year-old boy was referred to hematology clinic with a provisional diagnosis from his GP as having beta thalassemia major. After lab evaluation, the mother was told that he had hereditary spherocytosis.**

**I. The diagnosis of hereditary spherocytosis was based on:**

- a. G6PD assay was normal.
- b. Osmotic fragility test was positive.
- c. Hemoglobin A was normal.
- d. Serum iron was high.

Answer: b.

**II. The diagnosis of beta thalassemia major was excluded because:**

- a. Serum ferritin was high.
- b. Reticulocytic count was high.
- c. HbF was normal.
- d. Serum iron was high.

Answer: c.

**29. Regarding spherocytosis, which is false:**

- a. Hereditary spherocytosis may present as jaundice in the neonates.
- b. It is AD disease and can never affect a child with healthy parents.
- c. The severity of neonatal jaundice is usually mild.
- d. Splenectomy is indicated in some cases of hereditary spherocytosis.

Answer: b.

**30. All of the following are laboratory features of haemolytic anaemia except:**

- a. Reticulocytosis.
- b. Decreased iron binding capacity.
- c. Urine become darker in colour due to high serum direct bilirubin.
- d. Blood films to show anisocytosis and target cells.

Answer: c.

**31. In beta thalassemia major:**

- a. Normochromic RBCs.
- b. Target cells seen in blood film.
- c. Narrow medulla of long bones.
- d. Anisocytosis or RBCs is constant in bone marrow.

Answer: b.

**32. In iron deficiency anemia:**

- a. Decreased iron binding capacity is expected.
- b. Marked hepatomegaly is a common finding.
- c. Mebendazoles sometimes used in management.
- d. Diastolic murmur is commonly audible.

Answer: c.

**33. A false statement regarding sickle cell anaemia is:**

- a. Vaso-occlusive crisis are the least common presentation of the disease.
- b. Human parvovirus B19 is an important cause of aplastic crisis.
- c. Splenic infarction may result in functional hyposplenism.
- d. Association with G6PD deficiency leads to hyperhaemolytic crisis.

Answer: a.

**34. Sickle cell trait is characterized by the following, except:**

- a. They are heterozygous and have one healthy gene.
- b. RBCs content of HbS is usually more than 75%
- c. Hypoxic condition, as shock or high altitude may induce painful crisis.
- d. High incidence in black race and protect against malaria.

Answer: b.

**35. Which of the following causes hemolysis in G6PD deficiency:**

- a. Infection with EBV.
- b. Ingestion of peas.
- c. Aspirin.
- d. All of the above.

Answer: d.

**36. The factors promoting sickling are as follows, except:**

- a. Anoxia.
- b. Acidosis.
- c. Infection.
- d. Overhydration.

Answer: d.

**37. In beta thalassemia major, which of the following statements is correct:**

- a. Patient is heterozygous for the abnormal beta globin gene.
- b. Splenomegaly is uncommon.
- c. Hemoglobin electrophoresis shows elevated hemoglobin F (10-90%) and hemoglobin A2 (7-15%).
- d. Anemia is microcytic hypochromic.

Answer: d.



**38. Which of the following is true concerning hemoglobin:**

- a. HbA2 is formed of 2 alpha and 2 beta chains.
- b. HbA is formed of 2 alpha and 2 gamma chains.
- c. HbF is formed of 2 alpha and 2 delta chains.
- d. In HbS, amino acid number 6 in beta chain is changed.

Answer: d.

*HbA: 2 alpha & 2 beta.*

*HbA2: 2 alpha & 2 delta.*

*HbF: 2 alpha & 2 gamma.*

**39. An 8-month old female infant is admitted because the mother noted that her infant has become yellow during the past 2 to 4 weeks. Family history is significant for mild anemia of unknown etiology in the mother. Examination reveals pallor (hematocrit 15%), jaundice & splenomegaly.**

**I. In this infant, the following are expected lab findings, except:**

- a. Reticulocytic count of 8%.
- b. Microcytosis.
- c. HbF >90%.
- d. Conjugated hyperbilirubinemia.

Answer: d.

**II. An expected lab finding in the infant's mother:**

- a. Increased HbA2.
- b. Bone marrow aplasia.
- c. Increased glycosylated hemoglobin.
- d. Increased mean corpuscular volume (MCV).

Answer: a.

**40. Manifestation of the splenic infarct include all, except:**

- a. Abdominal pain.
- b. Reduced splenic size.
- c. Splenomegaly.
- d. Vomiting.

Answer: c.

**41. Sickle cell disease patient is susceptible to the following infection:**

- a. Pneumococci.
- b. Salmonella.
- c. Both a & b.
- d. None of the above.

Answer: a.

**42. In child presenting with active hemolysis due to an inherited hemolytic anemia:**

- a. Anemia is usually macrocytic.
- b. The plasma conjugated bilirubin level is elevated.
- c. Reticulocyte count will be less than 1%.
- d. Plasma haptoglobin will be elevated.
- e. There is excess urinary urobilinogen.

Answer: e.

**43. All are usual findings in sickle cell disease, except:**

- a. Reticulocytopenia.
- b. Diagnosis is confirmed by Hb electrophoresis.
- c. Renal nephropathy may occur.
- d. Normal MCV.

Answer: a.

**44. A 9-year-old previously well boy is brought to the office by his mother, she reports that he developed pallor, dark urine and jaundice over past few days, he is taking trimethoprim sulfamethoxazole for otitis media which of the following are the most likely cause of the symptoms:**

- a. Hepatitis B.
- b. Hepatitis A.
- c. Hemolytic-uranic syndrome.
- d. G6PD↓.

Answer: d.

**45. A 10-year-old male presents with sudden onset of jaundice, dark-colored urine, back pain, and fatigue. He was started on trimethoprim-sulfamethoxazole for an ear infection a few days ago. He has a family history of blood disorders. On examination, he is jaundiced and pale. Abdominal and cardiovascular examination is unremarkable. Which of the following is the least likely diagnosis?**

- a. Autoimmune hemolytic anemia.
- b. G6PD deficiency.
- c. Sickle cell anemia.
- d. Thalassemia.

Answer: d.

**46. An 8-year-old girl presents with fever, numerous bruises over the entire body and pain in both legs. Examination revealed pallor, ecchymoses, petechiae on the face, trunk and extremities. Spleen is palpable at 2 cm below left costal margin. CBC shows Hb 6.3 g/dl, WBCs 2800/mm<sup>3</sup> and platelet count of 29,000/mm<sup>3</sup>. The most appropriate diagnostic test is:**

- a. Bone marrow aspiration.
- b. Skeletal survey.
- c. Anti-platelet antibodies.
- d. Abdominal ultrasound.

Answer: a.

**47. A 2-year-old boy with fever, and acute onset of pallor, red urine and jaundice. His Hb % was 7 mg/dl and reticulocyte 12%. He was on an antipyretic for 2 days. The most probable diagnosis is:**

- a. Acute leukemia.
- b. Acute glomerulonephritis.
- c. G6PD ↓.
- d. Aplastic anemia.

Answer: c.

**48. Anemia maybe caused by deficiency of any of the following, except:**

- a. Protein.
- b. Iron.
- c. Copper.
- d. Folate.

Answer: c.

**49. Hemophilia A is characterized by:**

- a. Decreased activity of factor IX.
- b. Inherited as autosomal recessive disorder.
- c. Onset after 1<sup>st</sup> year of life.
- d. Abnormal coagulation time.

Answer: d.

**50. An anxious father who is having G6PD ↓ asked (can I feed my 9 months old son beans?).**

**I. Your answer:**

- a. Test his mother enzyme level, if normal, feed him.
- b. Feed him one spoon only and check urine color.
- c. Don't give him it's male dominant disease.
- d. All are not correct.

Answer: d.

**II. Most accurate test:**

- a. Hb level
- b. Reticulocyte count
- c. G6PD level
- d. Osmotic fragility of RBCs

Answer: c.

**51. Two weeks after a viral illness, a 2-year-old child developed skin rash, more prominent over the legs. His urine was dark with excess proteins and RBCs. His ankles were swollen and tender. His plasma creatinine was 1.5 g/dl.**

**I. What is the most likely diagnosis:**

- a. Idiopathic thrombocytopenic purpura.
- b. Post-streptococcal glomerulonephritis.
- c. Schonlein glomerulonephritis.
- d. Rheumatoid arthritis.

Answer: c.

**II. What therapy do you recommend:**

- a. Aspirin.
- b. Steroids.
- c. Renal transplantation.
- d. None of the above.

Answer: b.

**52. Which of the following is correct about sickle cell anemia?**

- a. Hyperhemolytic crisis is usually very painful to patient.
- b. Hepatic sequestration crisis occurs leading to enlarged tender liver.

- c. Sudden attack of aplasia of the bone marrow may follow viral infection.
- d. Splenic enlargement is significant in all children.

Answer: b.

**53. A 7-year-old boy with hereditary spherocytosis has a high fever and is brought to the emergency department in a state of circulatory shock. He has had no medical problems and has taken no medications since spontaneous splenectomy was performed at 6 years of age. What's the most likely explanation of this condition?**

- a. Pneumococci sepsis.
- b. Bleeding from splenic vessels.
- c. Acute hemolytic attack.
- d. Sequestration crisis.

Answer: a.

**54. Which of the following is correct about G6PD ↓?**

- a. X-linked dominant.
- b. Stool is black in severe cases.
- c. Hemolysis may be due to ingestion of certain drugs.
- d. It has no sex predilection.

Answer: c.

**55. Etiology of acute hemolytic anemia includes the following, except:**

- a. G6PD ↓.
- b. Autoimmune hemolytic anemia.
- c. ABO incompatibility.
- d. Thalassemia minor.

Answer: d.

**56. An 8-year-old black male presents to emergency room complaining of severe pain in hand and feet mother gave history of repeated similar painful attacks and history of repeated blood transfusion such painful episodes are more common during hot weather and are usually treated in hospital by IV fluids**

**What is the most likely diagnosis?**

- a. Haemophilia.
- b. Sickle cell anaemia.
- c. Acute leukaemia.
- d. Juvenile chronic arthritis.

Answer: b.

**57. One of the following is NOT an expected finding:**

- a. Mild jaundice.
- b. Short systolic murmur.
- c. Huge splenomegaly.
- d. Increased reticulocyte count.

Answer: c.

**58. All the following are diagnostic of haemolytic anaemia, except:**

- a. Microcytic hypochromic anaemia.
- b. Low reticulocyte count.
- c. Low red cell survival.

- d. Hypercellular bone marrow.

Answer: b.

**59. Spherocytosis is:**

- a. Autosomal dominant.
- b. Sex linked dominant.
- c. Autosomal recessive.
- d. Sex linked recessive.

Answer: a.

**60. The anemia in beta thalassemia major is:**

- a. Normocytic normochromic.
- b. Microcytic hypochromic.
- c. Macrocytic hyperchromic.
- d. Macrocytic hypochromic.

Answer: b.

**61. Causes of microcytic anemia include all the following, except:**

- a. Thalassemia trait.
- b. Sickle cell disease.
- c. Lead poisoning.
- d. Iron deficiency.

Answer: b.

**62. A 5-year-old child presents with history of fever for past 2 weeks, petechial spots all over the body with increasing pallor over the last month and splenomegaly 4 cm below costal margin. The most likely diagnosis is:**

- a. Acute leukemia.
- b. ITP.
- c. Hypersplenism.
- d. Aplastic anemia.

Answer: a.

**63. This 4-year old male is referred with a chief complaint of easy bruising. The parents are consanguineous. Examination reveals head circumference, height, and weight less below the 5<sup>th</sup> percentile, dark skin and abnormal head and no Organomegaly. Blood picture shows platelet count 18,000/mm<sup>3</sup>, Hb 8 gm%, WBCs 5000/mm<sup>3</sup>. The most likely diagnosis is:**

- a. ITP.
- b. Acute leukemia.
- c. Acquired aplastic anemia.
- d. Fanconi anemia.

Answer: d.

**64. Reticulocytosis is present in all of the following, except:**

- a. Chronic hemolytic anemia.
- b. Iron therapy of Iron deficiency anemia.
- c. Aplastic anemia.
- d. Acute hemolytic anemia.

Answer: c.

**65. Acute leukemia may present by:**

- a. Purpura.
- b. Arthritis.
- c. Repeated bacterial infection.
- d. All of the above.

Answer: d.

**66. Over the past 3 to 4 days, a 7-year-old boy has become progressively ill with mild, mid-abdominal pain that have become steadily worse. On physical examination, he has an elevated rash on his thighs, feet, and buttocks. The rash does not blanch and he has semi-soft dark stool, which is guaiac-positive.**

*Guaiac-positive = occult blood in stool.*

**I. The most likely diagnosis:**

- a. Acute appendicitis.
- b. Henoch-Schonlein purpura.
- c. Acute leukaemia.
- d. Shigella dysentery.

Answer: b.

**II. An expected laboratory finding is:**

- a. Marked leucocytosis.
- b. Blast cells in peripheral blood.
- c. Normal platelet count.
- d. Positive stool culture.

Answer: c.

**67. A 4-year-old boy presents with severe pains in both of his legs. On physical examination, he is noted to have marked pallor on his lips and palpebral conjunctiva. Numerous purpura and petechiae are noted on his skin. His spleen is palpable 3 cm below his left costal margin. Laboratory evaluation reveals a white blood cell count of  $1600/\text{mm}^3$ , hemoglobin of 6.1 g/dl and platelets of  $36.000/\text{mm}^3$ .**

**I. The most likely diagnosis is:**

- a. Acute leukemia.
- b. Aplastic anemia.
- c. German measles.
- d. Immune thrombocytopenic purpura.

Answer: a.

**II. The following is not an expected finding:**

- a. Hematuria.
- b. Repeated infections.
- c. Lymphadenopathy.
- d. Reticulocytosis.

Answer: d.

**68. Repeated blood transfusion is indicated in thalassemia children to:**

- a. Achieve better growth.
- b. Decrease cardiac dilation.
- c. Both a and b.

- d. None of the above.

Answer: c

**69. 2 weeks after a viral illness, a two years old child developed bruising and petechiae, more prominent over the legs. He had neither hepatosplenomegaly nor lymph node enlargement. Investigations revealed a normal hemoglobin, hematocrit, and white cell count. Platelet count was 15.000/mm<sup>3</sup>. What is the most likely diagnosis?**

- a. Von-Willebrand disease.
- b. Acute lymphoblastic leukemia.
- c. Aplastic anemia.
- d. Immune thrombocytopenia.

Answer: d.

**70. A 22-month-old boy presents with the chief complaint of pallor. He is a picky eater taking small amounts of fresh vegetables and fruits and drinks lots of tea cups. On examination, he has pallor. Investigations revealed: WBCs 6100, hemoglobin 8.2 gm/dl, Hct 19% and microcytosis with hypochromia. Which of the following you don't recommend as one of your initial management plan:**

- a. Give blood transfusion.
- b. Ask for stool analysis.
- c. Start oral iron and change his diet habits.
- d. Ask for renal functions.

Answer: a.

**71. Seven-year-old child was presented to emergency room with acute abdominal pain and tenderness. His eyes were puffy and his urine was dark in color. On examination, there were purpuric spots over his buttocks. All the following should be done, except:**

- a. Liver functions test.
- b. Urine analysis.
- c. Platelet count.
- d. Immediate renal biopsy.

Answer: d.

**72. The following is correct about G6PD deficiency:**

- a. X-linked recessive.
- b. Stool is clay in color.
- c. Hemolysis maybe due to ingestion of amoxicillin.
- d. Both parents of affected child should be carriers.

Answer: a.

**73. A 4-year-old girl was generally unwell, feeling lethargic, looking pale and occasionally febrile over a period of 9 weeks. 2 courses of antibiotics for recurrent sore throat failed to result in any benefit. Examination showed pallor, petechiae, lymphadenopathy and mild hepatosplenomegaly. Initial lab results showed Hb 8.3 g/dl and platelets 44 x 10<sup>9</sup>/L.**

**What is the most likely diagnosis:**

- a. Immune thrombocytopenia.
- b. Aplastic anemia.
- c. Acute leukemia.
- d. Henoch-Schonlein purpura.

Answer: c.

**74. All of the following are characteristic of immune thrombocytopenic purpura, except:**

- a. Intracranial hemorrhage is a serious complication.
- b. Always associated with splenomegaly.
- c. Anti-platelet antibodies are the main cause.
- d. Is preceded by upper respiratory infection in more than 60% of cases.

Answer: b.

**75. The following are features of sickle cell anemia, except:**

- a. Homozygous form of sickle cell disease.
- b. Repeated vaso-occlusive crisis may lead to auto splenectomy.
- c. Hb electrophoresis reveals that HbS is in range 50-60%.
- d. Sickle-shaped red cells are seen in peripheral blood.

Answer: c.

**76. Which of the following is correct about Henoch-Schonlein purpura:**

- a. Arthritis is not a common finding.
- b. Normal platelet count.
- c. Dramatic response to aspirin therapy.
- d. Steroid therapy is indicated to all cases.

Answer: b.

**77. Which of the following is correct about Henoch-Schonlein purpura:**

- a. Arthritis is a common finding.
- b. Defective budding of megakaryocytes in bone marrow.
- c. Abdominal pain should be treated with antispasmodics.
- d. Nephritis usually progress to end-stage renal failure.

Answer: a.

**78. Which of the following is correct about immune thrombocytopenic purpura:**

- a. It's due to drug suppression of the bone marrow.
- b. Hepatomegaly is characteristic.
- c. Anti-platelet antibody is present.
- d. Prognosis is poor.

Answer: c.

**79. What is the risk for a woman to be a carrier if she is the daughter of a man having hemophilia (an X-linked recessive disorder):**

- a. 100%.
- b. 50%.
- c. 25%.
- d. 0%.

Answer: a.

**80. All the following are correct about G6PD deficiency, except:**

- a. X-linked dominant disorder.
- b. Acute form of hemolytic anemia.
- c. Hemolysis maybe due to drug intake.
- d. Death may occur in severe hemolysis.

Answer: a.



**81. A 6-year-old boy presented with one month history of fever and one day history of bleeding gums, subconjunctival bleed and purpuric rash. Investigations revealed that Hb is 6.4 gm/dl, platelets are 35.000/mm<sup>3</sup> with no abnormal cells detected in blood film.**

**I. Which is the most helpful for diagnosis?**

- a. White cell count and condition of spleen.
- b. Bleeding time and clotting time.
- c. Degree and pattern of fever.
- d. Vaccination history.

Answer: a.

**II. What is the most serious complication?**

- a. Febrile convulsions.
- b. Severe anemia.
- c. Intracranial bleeding.
- d. Sepsis.

Answer: c.

**82. Which of the following statements about Henoch-Schonlein purpura is false:**

- a. Arthritis is not permanent.
- b. Microscopic hematuria may occur.
- c. It may be associated with abdominal pain.
- d. Thrombocytopenia is commonly found.

Answer: d.

**83. The most common pediatric malignancy is:**

- a. Brain tumor.
- b. Neuroblastoma.
- c. Lymphoma.
- d. Leukemia.

Answer: d.

**84. One of the following is true about purpura:**

- a. It blanches with pressure.
- b. Thrombocytopenia is always present.
- c. It is usually associated with hemarthrosis.
- d. Maybe caused by acute lymphoblastic leukemia.

Answer: d.

**85. Hemophilia A is characterized by:**

- a. Decreased activity of factor IX.
- b. Autosomal recessive disorder.
- c. Hemarthrosis is a common complication.
- d. Normal partial thromboplastin time.

Answer: c.

**86. One of the following is correct about Henoch-Schonlein purpura:**

- a. Bone marrow is the only diagnostic tool.
- b. Abdominal pain is not a feature of the disease.
- c. Skin lesions characteristically start in the face.

- d. Renal affection is a common association.

Answer: d.

**87. One of the following is correct about immune thrombocytopenic purpura:**

- a. Bone marrow aspiration is diagnostic.
- b. Prolonged partial thromboplastin time.
- c. Splenomegaly is always present.
- d. Defective budding of megakaryocytes is seen in the blood film.

Answer: a.

**88. A 9-year-old female is referred to the hematology department with a chief complaint of acute onset of easy bruising and "rash" for 3 days. She had upper respiratory infection symptoms approximately 2 weeks ago. A diffuse petechial rash is noted on her neck, trunk, extremities & groin. Clinical examination is otherwise unremarkable.**

**I. The most probable diagnosis is:**

- a. Immune thrombocytopenic purpura.
- b. Bone marrow failure.
- c. Hemophilia A.
- d. Acute lymphoblastic leukemia.

Answer: a.

**II. Treatment options include:**

- a. Bone marrow transplantation.
- b. Plasma transfusion.
- c. Corticosteroids.
- d. Vitamin K injection.

Answer: c.

**89. Henoch-Schonlein purpura is characterized by:**

- a. Purpuric eruption mostly on the face.
- b. Chronic persistent arthritis.
- c. Abdominal pain.
- d. Pyelonephritis.

Answer: c.

**90. A 10-year-old child boy presented with bleeding gums that wasn't provoked by trauma. On examination, there were multiple bluish ecchymotic patches and many pinpoint reddish spots over the trunk and limbs. CBC revealed a total leukocytic count  $5700/\text{mm}^3$ , Hemoglobin of 13 gm/dl and platelet count of  $15.000/\text{mm}^3$ . Liver and spleen were normal.**

**I. The most likely diagnosis is:**

- a. ITP.
- b. Hemophilia A.
- c. Acute leukemia.
- d. Aplastic anemia.

Answer: a.

*NB: normal WBCs count:  $4.500-11.000/\text{mm}^3$ .*

**II. The following is expected:**

- a. Hypocellular bone marrow.
- b. Lymphoblasts to the peripheral blood.
- c. Anisocytosis and poikilocytosis.
- d. Defective budding in bone marrow.

Answer: d.

**91. Beta thalassemia major is characterized by:**

- a. Normal life span of RBCs.
- b. Hypocellular bone marrow.
- c. Decreased urobilin in urine and stools.
- d. Target cells usually seen in peripheral blood film.

Answer: d.

**92. Condition in which bleeding time is normal but partial thromboplastin time is prolonged in deficiency of factor include all, except:**

- a. VII.
- b. X.
- c. VI.
- d. V.

Answer: a.

*PT: factor 7.*

*PTT: factor 8, 9, 11.*

*TT: factor 1, 2, 5, 10.*

**93. Von Willebrand disease is characterized by all the following, except:**

- a. Autosomal dominant inheritance.
- b. Peripheral blood smear usually shows thrombocytopenia.
- c. Bleeding usually manifests as epistaxis and easily bruising.
- d. Platelets adhesion is reduced.

Answer: b.

**94. Hemophilia A is inherited as:**

- a. Sex linked recessive.
- b. Autosomal dominant.
- c. Sex linked dominant.
- d. Autosomal recessive.

Answer: a.

**95. A 10-month-old white male presents with a 1-day history of persistent bleeding after cutting his lip slightly. The family history is unremarkable. The patient is receiving no medication, laboratory data reveals a hemoglobin volume of 11 g\dl platelets of 350,000, normal bleeding time, a prothrombin time of 11.8 seconds and a PTT of 100 seconds (prolonged). The most likely diagnosis is:**

- a. VWD.
- b. Hemophilia.
- c. Purpura.
- d. Scurvy.

Answer: b.

**96. Appropriate long-term management of the disease in the previous case include all the following, except:**

- a. Avoiding aspirin.
- b. Hepatitis vaccine.
- c. Splenectomy.
- d. Desmopressin for mild hemorrhage

Answer: c.

**97. 10 years later, patient in previous question experiences hemarthrosis that become refractory to standard doses of factor VIII, the most likely cause of this is:**

- a. Worsening of hemophilia.
- b. Developmental of factor VIII antibodies.
- c. Developmental of AIDS.
- d. Developmental of hepatitis

Answer: b.

# Respiration

---

## MCQ:

---

**1. All the following anti-tuberculous drugs are given orally, except:**

- a. Isoniazid.
- b. Rifampicin.
- c. Pyrazinamide.
- d. Streptomycin.

Answer: d.

**2. Regarding tuberculin test, which of the following statement is NOT correct:**

- a. The dose of purified protein derivative (PPD) injected is 0.1 ml.
- b. PPD is injected intra-dermally.
- c. The reaction should be read within 36 hours.
- d. It is the induration and not the erythema that counts in the interpretation.

Answer: c.

**3. The dose of rifampicin (an anti-tuberculous drug) is:**

- a. 6-8 mg/kg/day.
- b. 10-20 mg/kg/day.
- c. 20-40 mg/kg/day.
- d. 40-60 mg/kg/day.

Answer: b.

**4. In which grade of respiratory distress grunting is heard:**

- a. Grade 1.
- b. Grade 2.
- c. Grade 3.
- d. Grade 4.

Answer: c.

**5. A 6-year-old girl presented to ER with severe irritability and nonstop crying of 2 hours duration. The mother said that her girl had a runny nose since 5 days. On examination, the girl was febrile (temperature 38.7°C), a yellowish discharge was seen coming from the right ear and the left tympanic membrane was congested and bulging.**

**I. The most likely diagnosis is:**

- a. Acute otitis externa.
- b. Acute otitis media.
- c. Acute mastoiditis.
- d. Acute labyrinthitis.

Answer: b.

**II. The commonest bacteria that causes this condition is:**

- a. Staphylococcus aureus.
- b. Streptococcus pneumoniae.

- c. *Pseudomonas aeruginosa*.
- d. Group A beta hemolytic streptococcus.

Answer: b.

**6. The dose of IM streptomycin (an anti-tuberculous drugs) is:**

- a. 5-8 mg/kg/day.
- b. 10-20 mg/kg/day.
- c. 20-40 mg/kg/day.
- d. 40-60 mg/kg/day.

Answer: c.

**7. A 4-year-old girl presented to paediatrician due to chronic ill health (the exact terms of mother). On examination, child's body weight was 12 kg (below 3<sup>rd</sup> percentile) and height was 89 cm (below 3<sup>rd</sup> percentile). The mother said that her girl used to have very recurrent chest infections and almost never cough-free. She describes her cough to be loose and productive. The girl also had frequent afebrile diarrhea. At her neonatal period, she had prolonged neonatal jaundice.**

**I. The most likely diagnosis is:**

- a. Chronic persistent asthma.
- b. Lactose intolerance.
- c. Cystic fibrosis.

Answer: c.

**II. The type of diarrhea that is usually seen in these patients is:**

- a. Bloody diarrhea.
- b. Watery diarrhea.
- c. Steatorrhea.
- d. Starvation diarrhea.

Answer: c.

**8. An 8-year-old girl was diagnosed to have bacterial pneumonia since 4 days. She was hospitalized and received IV ampicillin. Today, while in hospital, her temperature went up to 39.8°C, her respiratory distress increased significantly, the right lung is stony dull on percussion and trachea is significantly shifted to the left side. Oxygen saturation in room air is 90%.**

**I. What is the most probable cause of this deterioration:**

- a. Right massive empyema.
- b. Right tension pneumothorax.
- c. Right lung abscess.
- d. Type I respiratory failure.

Answer: a.

**II. The least urgent intervention is:**

- a. Oxygen therapy.
- b. Intercostal tube for drainage.
- c. Chest x-ray.
- d. CBC.

Answer: d.

**9. A 3-year-old boy was brought to endocrinology clinic because of failure to gain weight. His weight and height were below the 3<sup>rd</sup> percentile for age and sex. History was positive for abnormally recurrent chest infections, for which he was hospitalized 3 times in the last 4 months. The mother also states that her child used to have frequent large pale very offensive greasy stools. A similar condition was seen in his late brother who died at the age of 6 years.**

**I. The most likely diagnosis is:**

- a. Celiac disease.
- b. Cow milk allergy.
- c. Cystic fibrosis.
- d. Lactose intolerance.

Answer: c.

**II. The stool abnormalities are caused by:**

- a. Pancreatic exocrine insufficiency.
- b. IgE-mediated villous atrophy.
- c. Deficiency of lactase enzyme.
- d. Infantile cholestasis.

Answer: a.

**10. False negative tuberculin test may happen in the following situation except:**

- a. Cachexia e.g. marasmus.
- b. Cell mediated immunodeficiency.
- c. Recent use of corticosteroids.
- d. Obesity.

Answer: d.

**11. Ghon's focus is:**

- a. Primary complex.
- b. Miliary TB.
- c. TB cavitation.
- d. TB lymphadenitis.

Answer: a.

**12. Which of the following is correct about otitis media:**

- a. Hemophilus influenza is one of the common causative agents.
- b. Rarely seen below 1<sup>st</sup> year of life.
- c. Young children are more prone due to their long Eustachian tubes.
- d. Oral penicillin V should be given for all patients.

Answer: a.

**13. All the following about bronchiectasis in children is true except:**

- a. There is destruction of ciliated epithelium with loss of elastic tissue.
- b. Can be congenital or acquired.
- c. Clubbing of fingers is rare.
- d. Anorexia, fever and poor weight gain are common.

Answer: c.

**14. A 6-year-old boy was brought to his physician because of progressively increasing respiratory distress over the last day. His temperature is 37.6°C, respiratory rate is 65/minute with a bluish tinge of his lips. Auscultation revealed minimal wheezing and diminished air entry bilaterally.**

**I. The patient should be:**

- a. Treated at home with oral salbutamol.
- b. Treated at home with nebulized salbutamol.
- c. Treated at home with inhaled corticosteroids.
- d. Immediately hospitalized.

Answer: d.

**II. The following is not a prophylactic agent:**

- a. Inhaled sodium cromoglycate.
- b. Inhaled budesonide.
- c. Montelukast.
- d. Oral salbutamol.

Answer: d.

**15. All of the following statements about tuberculosis in children are true, except:**

- a. Chest TB is more common than other types.
- b. Tuberculin test is always positive in any tuberculous child.
- c. Should be included in all differential diagnosis of chronic chest problems.
- d. BCG doesn't give full protection against TB.

Answer: b.

**16. All the following are true about acute bronchiolitis, except:**

- a. Most cases are under 2 years old.
- b. Most cases are caused by RSV.
- c. Antibiotics are recommended in infants below 3 months age.
- d. Steroids maybe helpful in some cases.

Answer: c.

**17. One of the following is not a first line of anti-tuberculous drugs:**

- a. Kanamycin.
- b. Isoniazid.
- c. Pyrazinamide.
- d. Rifampicin.

Answer: a.

**18. One of the following is true about bronchiolitis:**

- a. It is a common cause of wheezing in infants.
- b. Mainly presents by harsh expiratory sounds.
- c. Corticosteroids therapy is often useful.
- d. Family history of atopy is usually present.

Answer: a.

**19. In tuberculosis:**

- a. Bovine bacilli never cause infection to human.
- b. Ghon's focus is seen in primary complex.
- c. BCG is prepared from killed mycobacterium tuberculosis.



- d. Pulmonary affection in primary complex is very rare.

Answer: b.

**20. A 5-year-old boy presents with a 1-week-history of fever, anorexia, productive cough, and right upper quadrant abdominal pain. On examination, he is febrile, short of breath, with mild subcostal and intercostal recessions. Auscultation reveals decreased breath sounds and bronchial breathing on the right side of her chest.**

**I. What is the most likely diagnosis:**

- a. Viral hepatitis.
- b. Right lower lobe pneumonia.
- c. Acute appendicitis.
- d. Congenital diaphragmatic hernia.

Answer: b.

**II. Management includes the following except:**

- a. Oxygen.
- b. Antibiotics.
- c. Chest x-ray.
- d. Surgery.

Answer: d.

**21. Regarding cystic fibrosis, which is wrong:**

- a. Autosomal recessive disease.
- b. Failure to thrive and malabsorption are common features.
- c. Recurrent chest infections are common.
- d. Respiratory secretions are lower in viscosity.

Answer: d.

**22. A 4-year-old girl was brought to the ER with temp 39.8°C and breathing difficulty. On examination, the girl looked toxic though of normal consciousness, RR 64/min, working ala nasi, intercostal retractions and grunting. Her O<sub>2</sub> saturation at room air was 90%. Chest x-ray showed opacity in right upper lobe with central trachea.**

**I. The grade of respiratory distress is:**

- a. Grade 1.
- b. Grade 2.
- c. Grade 3.
- d. Grade 4.

Answer: c.

**II. The most likely diagnosis is:**

- a. Bronchopneumonia.
- b. Lobar pneumonia.
- c. Right upper lobar collapse.
- d. Foreign body aspiration.

Answer: b.

**23. Which of the following is correct about lung abscess:**

- a. Bronchoscopy is used to aspirate pus.
- b. Antibiotic therapy for 6 weeks is usually indicated.
- c. Metastatic lung abscess is common in children.

- d. Its clinical picture starts acutely.

Answer: b.

**24. The commonest cause of pneumonia in infancy is:**

- a. Tuberculosis.
- b. Aspiration.
- c. Viral.
- d. Pneumococcal.

Answer: c.

**25. Suppurative lung diseases include:**

- a. Asthma.
- b. Bronchiolitis.
- c. Emphysema.
- d. Empyema.

Answer: d.

**N.B.**

Suppurative lung diseases are:

- Lung abscess.
- Bronchiectasis.
- Empyema.

**26. A 4-year-old girl suffered from fever and mild tachypnea for 2 days. She was treated with oral amoxicillin in a dose of 50 mg/kg/day in 3 divided doses. Two days later, her respiratory distress and fever were getting worse. Chest x-ray revealed a lung abscess occupying the left with patchy lung consolidation.**

**I. The most probable organism is:**

- a. Mycobacterium tuberculosis.
- b. Staphylococcus aureus.
- c. Respiratory syncytial virus.
- d. Adenovirus.

Answer: b.

**II. The following antibiotic should be added:**

- a. Tetracycline.
- b. Ceftriaxone.
- c. Vancomycin.
- d. Rifampicin + Isoniazid + Pyrazinamide.

Answer: c.

**27. A 4-year-old girl presented to the ER with severe grade 3 respiratory distress with slight bluish tinge in the lips on crying. The girl looked toxic, her temp. was 39.6°C, HR 128 bpm and RR 42/min. Her mother gave a history of high fever in the last 4 days and severe cough. Chest examination revealed diminished air entry over the right lung, scattered fine consonating crepitations, and patch of bronchial breathing. The left lung was to totally normal. Chest x-ray revealed a total opacification of her right lung with no medication shift. CBC showed leukocytosis, shift to left and toxic granulations.**

**I. The most likely diagnosis:**

- a. Acute bronchitis
- b. Acute bronchiolitis
- c. Bacterial pneumonia
- d. Pneumonia complicated with pleural effusion.

Answer: c.

**II. All of the following are to be anticipated (expected) in that baby, except:**

- a. Low O<sub>2</sub> saturation.
- b. High CRP.
- c. Immediate mechanical ventilation
- d. Immediate O<sub>2</sub> and antibiotics.

Answer: c.

**28. All the following can be complicated by lung abscess, except:**

- a. Lobar pneumonia.
- b. Hydropneumothorax.
- c. Tuberculosis.
- d. Foreign body aspiration.

Answer: b.

**29. In bronchiolitis:**

- a. Coryzal symptoms usually follow the illness.
- b. Wheezing is often but not always present.
- c. Bronchiolitis obliterans is the most common complication.
- d. Usually caused by parainfluenza virus.

Answer: b.

**30. Which of the following is true about bronchiolitis?**

- a. It is one of the atopic disorders.
- b. Most cases are caused by adenovirus.
- c. Oxygen therapy is the main line of management.
- d. Recurrence is very common.

Answer: c.

**31. Two-year-old child presented to ER acute onset of respiratory distress which followed recent change of residence. His mother said that this happened after she left him playing in the garden with his toys. On examination, there were right basal lung wheezes and intercostal retractions. The left side of his chest was free:**

**I. What's the most likely diagnosis:**

- a. Bronchial asthma.
- b. Foreign body inhalation.

- c. Immune deficiency.
- d. Bronchiectasis.

Answer: b.

**II. Investigation will be most helpful:**

- a. Pulmonary function test.
- b. Sputum examination.
- c. Serum immunoglobulins.
- d. Bronchoscopy.

Answer: d.

**32. Long term medication for asthma:**

- a. Theophylline.
- b. Ipratropium.
- c. Montelukast.
- d. Terbutaline.

Answer: c.

**33. All the following are complicated by lung abscess, except:**

- a. Acute bronchiolitis.
- b. Amoebiasis.
- c. Staph pneumonia.
- d. Foreign body aspiration.

Answer: a.

**34. The most likely causative agent of acute bronchiolitis is:**

- a. Adenovirus.
- b. Para-influenza virus.
- c. Epstein-Barr virus.
- d. Respiratory syncytial virus.

Answer: d.

**35. Bronchial asthma characterized by:**

- a. Common atopic disease of childhood.
- b. Recurrence is very rare.
- c. Low degree of reversibility of obstructive process.
- d. Bandemia is a constant feature in peripheral blood film.

Answer: a.

**36. A 2-year-old boy is seen because of sudden onset shortness of breath and cough, he had an upper respiratory infection 4 days ago. Earlier in the day, he was playing with peanuts. His immunization is up to date examination revealed respiratory distress with inspiratory stridor auscultation showed tachycardia & decrease breath sounds in right lower base. Diagnosis:**

- a. Bronchial asthma.
- b. Viral croup.
- c. Acute epiglottitis.
- d. Foreign body aspiration.

Answer: d.

**37. Serious complications of staphylococcal pneumonia include all the following, except:**

- a. Lung abscess.
- b. Bronchitis.
- c. Empyema.
- d. Lung collapse.

Answer: b.

**38. Paroxysmal stage of pertussis persists for:**

- a. 2 weeks.
- b. 3 weeks.
- c. 4 weeks.
- d. 6 weeks.

Answer: c.

**39. 9-month-old male is brought to clinic with history of episodes of paroxysms of cough since 1 month. Each paroxysm of cough is followed by vomiting and usually associated with inspiratory characteristic sound and intense congestion of the face. Examination of the chest is unremarkable and chest x-ray is normal.**

**I. What is the most likely diagnosis:**

- a. Tuberculosis.
- b. Whooping cough.
- c. Bronchial asthma.
- d. Viral croup.

Answer: b.

**II. One of the following is true about diagnosis:**

- a. Lymphopenia is common.
- b. Steroids are usually indicated.
- c. Pneumothorax may occur.
- d. Montelukast is a useful therapy.

Answer: c.

**40. Commonest cause of bacterial pneumonia in infancy is:**

- a. H. influenzae.
- b. Streptococcus.
- c. Staphylococcus.
- d. Pneumococcus.

Answer: d.

**41. The sound that is heard in the chest of asthmatic child is:**

- a. Croup.
- b. Snoring.
- c. Wheezing.
- d. Murmur.

Answer: c.

**42. All the following are known complications of pertussis, except:**

- a. Otitis media.
- b. Convulsions.
- c. Peripheral neuritis.

- d. Rectal prolapse.

Answer: c.

**43. A 4-year-old girl presents with a 3-day history of fever, cough, and respiratory distress. This has progressively worsened. She has previously been healthy. On examination, she has fever of 39.8°C, and respiratory rate of 45/minutes with moderate recession. Oxygen saturations are 89% in air. She has crackles at right base.**

**I. What is the most likely diagnosis:**

- a. Viral pneumonia.
- b. Whooping cough.
- c. Bacterial pneumonia.
- d. Bronchial asthma.

Answer: c.

**II. Which of the following findings is expected:**

- a. Consolidation of right lower lobe.
- b. Leucopenia.
- c. Hyper-inflated chest.
- d. Negative C-reactive protein test.

Answer: a.

**44. A mother of a previously healthy 3-year old male complains of cough and wheezes. The boy had been playing with a small toy. During examination, the right side of the heart shows hyperresonance, diminished vocal resonance and poor air entry.**

**I. The most probable diagnosis:**

- a. Foreign body aspiration.
- b. Bronchial asthma.
- c. Lobar pneumonia.
- d. Acute bronchitis.

Answer: a.

**II. One of the following is typical about diagnosis:**

- a. Being healthy before illness.
- b. The local chest findings.
- c. Both.
- d. Nor.

Answer: c.

**45. A 6-year-old patient with severe pneumonia is being treated with intravenous cefuroxime and is doing well until day 3 of hospitalization, when he develops a temperature of 39.2°C and complains of unilateral pleuritic chest pain and associated shortness of breath.**

**I. The most likely diagnosis is:**

- a. Viral myocarditis.
- b. Pleural effusion.
- c. Foreign body aspiration.
- d. Diaphragmatic hernia.

Answer: b.

**II. The next step of management is:**

- a. Obtain x-ray of the chest.
- b. Perform an echocardiogram.
- c. Arrange for bronchoscopy.
- d. Ask for surgical consultation.

Answer: a.

**46. Suppurative lung diseases include all except:**

- a. Bronchiectasis.
- b. Lung abscess.
- c. TB.
- d. Empyema.

Answer: c.

**47. A 16-week-old infant is brought to clinic because of cough, labored breathing, wheezing, and fever of two days' duration following a runny nose. The baby was delivered prematurely at 28 weeks. Chest examination reveals tachypnea, intercostal retractions, nasal flaring, hyperresonance to percussion, expiratory wheezing, and prolonged expiratory phase.**

**What is the most likely diagnosis:**

- a. Asthma.
- b. Heart failure.
- c. Pneumonia.
- d. Bronchiolitis.

Answer: d.

**48. A 6-year-old girl has had a dry cough without sputum for 2 months. The cough is worse after exercise and at night. Family history revealed that the parents have eczema. On physical examination, a wheeze in both lung fields is detected.**

**I. What is the most likely diagnosis:**

- a. Bronchial asthma.
- b. Pertussis.
- c. Bronchiectasis.
- d. Interstitial pneumonia.

Answer: a.

**II. One of the following is an expected finding:**

- a. Clubbing of fingers.
- b. Absolute lymphocytosis
- c. High fever and elevated ESR.
- d. Good response to bronchodilators.

Answer: d.

**49. All the following are common complications of pertussis, except:**

- a. Secondary bronchopneumonia.
- b. Aplastic anemia.
- c. Pneumothorax.
- d. Apnea in small infants.

Answer: b.

**50. An absolute indication of tonsillectomy and adenoidectomy in children is: (June 2011)**

- a. Recurrent tonsillitis.
- b. Obstructive sleep apnea.
- c. Recurrent otitis media.
- d. Enlarged tonsillar LNs.

Answer: b.

**51. Bronchial asthma characterized by all the following except:**

- a. Hyperactive airway.
- b. Clubbing.
- c. Spasmodic cough.
- d. Bilateral chest wheezes.

Answer: b.

**52. Clubbing of fingers is associated with the following conditions, except:**

- a. Bronchial asthma.
- b. Ulcerative colitis.
- c. Cystic fibrosis.
- d. Bronchiectasis.

Answer: a.

**53. A previously healthy 4 years old boy presented with difficult breathing for one day. Three days prior, he had developed a runny nose, cough and fever (40°C). On examination, he is awake, alert, in moderate distress, with decreased air entry over the right lower lobe with fine crepitations. His lab tests revealed leucocytosis with raised ESR. What is the appropriate next step in management:**

- a. Blood culture.
- b. Chest x-ray.
- c. IM antibiotics.
- d. IV antibiotics.

Answer: b

**54. A 5-year-old boy presents with a 1-week-history of fever, anorexia, productive cough, and right upper quadrant abdominal pain. On examination, he is febrile, short of breath, with mild subcostal and intercostal recessions. Auscultation reveals decreased breath sounds on the right side of her chest.**

**What is the most likely helpful investigation:**

- a. Liver enzymes.
- b. Chest x-ray.
- c. Abdominal ultrasound.
- d. Tuberculin test.

Answer: b.

**55. Regarding acute bronchiolitis, which of the following statements is wrong:**

- a. Mainly caused by adenovirus.
- b. Mainly occurs during first 2 years of life.
- c. Clinically, the child shows respiratory distress and expiratory wheezing.
- d. Case fatality rate is less than 1%.

Answer: a.



**56. Regarding cystic fibrosis which of the following is wrong:**

- a. A gene located on chromosome 7 is defective.
- b. Most patients have pancreatic endocrine problem.
- c. There is excessive concentrated NaCl in sweat.
- d. Respiratory secretions are higher in viscosity.

Answer: b.

**57. The most indicative signs of pneumonia in 1-year-old child is:**

- a. Fever and retractions.
- b. Grunting and breathing difficulty.
- c. Fever and rapid respiration.
- d. Audible wheezing.

Answer: c

**58. Cystic fibrosis is characterized by all except:**

- a. The concentration of sodium and chloride in sweat is abnormally high.
- b. Recurrent chest infection is common.
- c. Autosomal dominant.
- d. Gene located on chromosome 7 is defective.

Answer: c.

**59. Which of the following is true about bronchiolitis:**

- a. Never occurs after the age of 6 years.
- b. Most cases are caused by RSV.
- c. Antibiotics are recommended in infants below 3 months.
- d. Recurrence is very common.

Answer: b.

**60. In bronchial asthma which statement is wrong:**

- a. Chronic inflammatory disease in the airways.
- b. Self-limited disease (most patients recover before 6 years of age).
- c. Viral respiratory infections are among important asthma triggers.
- d. Has polygenetic (multifactorial) inheritance.

Answer: b.

**61. Asthma triggers include all the following except:**

- a. Viral respiratory infections.
- b. Tobacco smoke.
- c. House dust mite.
- d. Steroids.

Answer: d.

**62. Regarding childhood bronchial asthma, which of the following statements is wrong:**

- a. It is a chronic inflammatory disease of the airways.
- b. All asthmatic children should be advised to avoid certain foods e.g. eggs, chocolate.
- c. Viral respiratory infections are among the important asthma triggers.
- d. Most patients need controller medications as well as bronchodilators.

Answer: b.

**63. A 6-year-old asthmatic child presented to ER with severe grade III respiratory distress, bilateral diminished air entry and generalized wheezing. Oxygen saturation at room air is 88%.**

**I. The most appropriate 1<sup>st</sup> step is:**

- a. Ask for plain chest x-ray.
- b. Oxygen and nebulized salbutamol.
- c. Inhaled corticosteroids.
- d. IV steroids.

Answer: b.

**II. Which of the following is unlikely:**

- a. Positive family history of atopy.
- b. Eosinophilia in CBC.
- c. High total serum IgE.
- d. Jet black hyper translucency in chest x-ray.

Answer: d.

**64. Long-term controller medications for asthma include all except:**

- a. Inhaled corticosteroids as Fluticasone.
- b. Leukotriene modifiers as Montelukast.
- c. Mast cell stabilizers as sodium cromoglycate.
- d. Short acting beta adrenergic as salbutamol.

Answer: d.

**65. Regarding childhood bronchial asthma, which of the following statements is wrong:**

- a. The only mechanism of airway obstruction is bronchoconstriction (bronchospasm).
- b. During acute attack, chest is hyperinflated.
- c. Aspirin and NSAIDs are triggers of asthma.
- d. Prostaglandin E<sub>1</sub>.

Answer: a.

**66. Blood picture of a child with atopic bronchial asthma commonly shows:**

- a. Neutrophils.
- b. Eosinophils.
- c. Monocytosis.
- d. Lymphocytosis.

Answer: b.

**67. Regarding cystic fibrosis, which of the following is wrong:**

- a. Pancreatic exocrine insufficiency occurs in most patients.
- b. Results from a defect in a gene located on chromosome number 9.
- c. Recurrent chest infections are common.
- d. There is increase in the sodium and chloride levels in the sweat.

Answer: b.

**68. Regarding Pott's disease, which is wrong:**

- a. Lower thoracic spine is more commonly affected than cervical spine.
- b. May result in angular kyphosis.
- c. Affects body of one or more vertebrae.

- d. Tuberculin test is always negative.

Answer: d.

# GIT

---

## MCQ:

---

**1. Complications of GERD in infants include the following, except:**

- a. Iron deficiency anemia.
- b. Aspiration pneumonia.
- c. Metabolic acidosis.
- d. Esophageal stricture.

Answer: c.

**2. Glucose in oral rehydration solution (ORS) is added to:**

- a. Improve the taste.
- b. Meet the child's energy requirements.
- c. Prevent malnutrition.
- d. Facilitate sodium absorption.

Answer: d.

**3. Drug therapy in diarrhea:**

- a. Is highly effective.
- b. Shortens the duration of bacterial excretion in stools.
- c. Helps rehydration.
- d. Adds unnecessary cost.

Answer: d.

**4. All the following are manifestations of hypokalemia, except:**

- a. Hyperreflexia.
- b. Abdominal distension.
- c. General weakness.
- d. Cardiac arrhythmia.

Answer: a.

**5. Manifestations of dehydration include all the following except:**

- a. Weight loss.
- b. Fontanel affection.
- c. Decreased urine flow.
- d. Shortened capillary refill time.

Answer: d.

**6. Causes of metabolic acidosis include all the following, except:**

- a. Pyloric stenosis.
- b. Severe gastroenteritis.
- c. Diabetic ketoacidosis.
- d. Shock.

Answer: a.

**7. Hypotonic dehydration is characterized by:**

- a. Fluid movement from intracellular to extracellular compartment.
- b. Skin turgor is mildly affected.
- c. The tongue is moist.
- d. Serum sodium is normal.

Answer: c.

**8. Which of the following is true in cases of hypotonic dehydration:**

- a. Polyuria commonly occurs.
- b. Tongue is usually moist.
- c. Skin turgor is not affected.
- d. Intracellular fluid volume is decreased.

Answer: b.

**9. Post-enteritis (persistent) diarrhea maybe caused by all the following, except:**

- a. Sugar intolerance.
- b. Cow milk allergy.
- c. Bacterial colonization.
- d. Pancreatic dysfunction.

Answer: d.

**10. A 4 kg infant with severe dehydration (10% loss of his body weight) needs the following amount of intravenous fluid in the first 24 hours:**

- a. 1200 ml.
- b. 800 ml.
- c. 600 ml.
- d. 400 ml.

Answer: b.

*See fluid management of DKA (emergency chapter).*

**11. Persistent diarrhea is a term that describes diarrhea lasting for more than:**

- a. 7 days.
- b. 10 days.
- c. 14 days.
- d. 1 month.

Answer: c.

**12. Which of the following pathogens cause entero-invasive diarrhea:**

- a. Rotavirus.
- b. Cholera.
- c. Staph.
- d. Shigella.

Answer: d.

**13. 1-month-old boy is brought to emergency department by his mother, who states that he has projectile vomiting for the past several days. She states that he vomits every time she feeds him and his vomitus is non-bilious. On examination, the infant is mildly dehydrated and there is a palpable firm movable mass in the right upper quadrant.**

**I. The most likely diagnosis is:**

- a. Duodenal atresia.
- b. Intussusception.
- c. Hirschsprung disease.
- d. Pyloric stenosis.

Answer: d.

**II. Expected findings do not include:**

- a. Metabolic alkalosis.
- b. Constipation.
- c. Double bubble sign.
- d. Visible peristaltic waves.

Answer: c.

**14. A 5-week-old male presented with projectile vomiting after feeding and poor weight gain. On examination, visible peristalsis seen as a wave moving from left to right across the abdomen.**

**I. The most likely diagnosis:**

- a. Pyloric stenosis.
- b. Gastro-esophageal reflux.
- c. Acute gastritis.
- d. Esophageal stricture.

Answer: a.

**II. The recommended initial treatment is:**

- a. Drugs enhancing gastric emptying.
- b. Correction of fluid and electrolyte disturbance.
- c. Anti-emetic drugs.
- d. Thickening agents to the feeds.

Answer: b.

**15. The function of glucose in oral rehydration solution (ORS) is to:**

- a. Increase sodium absorption by cotransport.
- b. Give good taste to ORS.
- c. Increase osmolality of ORS.
- d. Increase  $\text{Na}^+/\text{K}^+$  pump activity.

Answer: a.

**16. A 5-week-old boy presents to clinic with vomiting for the last 2 weeks. He is not gaining weight properly. The mother states that the vomiting is projectile, non-bilious but she feels that he has a good suck and swallow. Examination revealed an olive-like mass felt to the right of the umbilicus. One of the following is not expected in this patient:**

- a. Diarrhea.
- b. Metabolic alkalosis.
- c. Dehydration.

- d. Good outcome.

Answer: a.

**17. Watery diarrhea is commonly caused by which of the following:**

- a. Rotavirus.
- b. Shigella.
- c. Campylobacter.
- d. Entamoeba histolytica.

Answer: a.

**18. The pathogenesis of persistent diarrhea includes all the following, except:**

- a. Sugar intolerance.
- b. Toxin production by entero-toxigenic E. coli.
- c. Cow milk allergy.
- d. Bacterial overgrowth in upper small intestine.

Answer: b.

**19. Persistent diarrhea:**

- a. Maybe associated with macerations of peri-anal skin.
- b. Secretory type of diarrhea.
- c. Considered if acute diarrhea lasts for 10 days or more.
- d. Usually associated with alkaline stools.

Answer: a.

**20. 1-year-old girl was brought to ER with temperature of 39°C, watery diarrhea (6 times in the last 24 hours) and vomiting (4 times in the last 24 hours). On examination, the girl has sunken eyes, lost skin turgor, mottling, cold extremities and capillary refill time was 7 seconds. Serum electrolytes: Na<sup>+</sup> 140 mEq/L and K<sup>+</sup> 4 mEq/L.**

*Normal serum potassium is 3.5-5 mEq/L.*

**I. The most appropriate diagnosis is:**

- a. Acute gastroenteritis.
- b. Hypovolemic shock complicating gastroenteritis and dehydration.
- c. Septic shock complicating gastroenteritis and dehydration.
- d. Hyponatremic dehydration.

Answer: b.

**II. Which of the following is not expected in this child:**

- a. Low CVP.
- b. Paralytic ileus.
- c. Weight loss >10%.
- d. Rehydration by ORS (oral rehydration solution).

Answer: d

**21. A 5-week-old infant was brought to the pediatrician because of what was described by the mother as persistent vomiting that started at the age of 2 weeks. The vomiting used to be forceful and white-yellow in color. It follows every meal. Revising the weight of the child, it was found to be 3400 gm at birth, 3350 gm at the age of 2 weeks, 3000 gm at the age of 4 weeks. An oval mass could be palpated in the right upper quadrant of abdomen.**

**I. The most likely diagnosis is:**

- a. Congenital pyloric stenosis.
- b. Duodenal atresia.
- c. Inborn error of amino acid metabolism.
- d. Milk allergy.

Answer: a.

**II. Which of the following is likely in this child:**

- a. Double bubble appearance in plain abdominal x-ray.
- b. Metabolic acidosis.
- c. Need for surgical intervention.
- d. Bile-stained vomitus.

Answer: c.

**22. A one year old presented to the emergency room with severe colicky abdominal pains associate with vomiting and bleeding per rectum. PR examination by the surgeon revealed a mass and blood on the finger on withdrawal. What is the most likely diagnosis.**

- a. Pyloric stenosis.
- b. Volvulus.
- c. Intussusception.
- d. Gastroenteritis.

Answer: c.

**23. Painful oral ulcers include:**

- a. Monilial stomatitis.
- b. Herpetic gingivostomatitis.
- c. Traumatic ulcer of a broken tooth.
- d. All of the above.

Answer: d.

**24. Monilial stomatitis is characterized by which of the following:**

- a. It is due to candida albicans infection.
- b. Usually starts after one year of age.
- c. Cloxacillin is the drug of choice for management.
- d. Formed of brown easily removed plaques.

Answer: a.

**25. Possible complications of severe gastroenteritis include all the following, except:**

- a. Dehydration.
- b. Metabolic alkalosis.
- c. Acute renal failure.
- d. Bleeding.



Answer: b.

**26. The most common cause for recurrent abdominal pains in children is:**

- a. Renal stones.
- b. Familial Mediterranean fever.
- c. Intestinal parasites.
- d. Inflammatory bowel disease.

Answer: c.

**27. One of the following is suggestive of organic origin of abdominal pain:**

- a. Being periumbilical.
- b. Presence of family problems.
- c. Interfering with activity and sleep.
- d. Severity of pain is mild to moderate.

Answer: c.

**28. Recurrent abdominal pain may occur in all of the following except:**

- a. Parasitic infestations.
- b. Lactose intolerance.
- c. Bad selection of food.
- d. Hypertrophic pyloric stenosis.

Answer: d.

**29. Features suggestive of an acute surgical abdomen in a 1-year-old infant include all except:**

- a. Periumbilical.
- b. Intermittent screaming episodes.
- c. Guarding.
- d. Red currant jelly stool.

Answer: a.

**30. A previously healthy 7-year-old girl comes to the office with complaints of episodic abdominal pain over the past several months. The pain is periumbilical that doesn't wake her from sleep or interfere with play. She has no fever, joint complaints or constipation or diarrhea. Growth and development have been normal. The physical examination is within normal limits.**

**I. The most likely diagnosis is:**

- a. Acute appendicitis.
- b. Acute cholecystitis.
- c. Parasitic infestation.
- d. Functional abdominal pain.

Answer: d.

**II. The most appropriate next step is:**

- a. CT scan of abdomen
- b. Anti-parasitic medication.
- c. Reassurance and follow up.
- d. Surgical consultation.

Answer: c.

**31. A 2-year-old boy is seen casualty with the complaint of significant abdominal distention. According to the mother the condition started 20 hours ago with what she describes as severe paroxysms of colic accompanied by loud crying. This was associated with repetitive vomiting. The vomitus is bile stained and stool contains blood and mucus.**

**I. The most likely diagnosis is:**

- a. Strangulated inguinal hernia.
- b. Mid gut volvulus.
- c. Gastroenteritis.
- d. Intussusception.

Answer: d.

**II. One of the following can't be present:**

- a. Fluid levels on erect abdominal x-rays.
- b. Sausage-shaped mass in right upper quadrant
- c. Double bubble appearance on abdominal x-rays
- d. Red currant jelly stools.

Answer: c.

**32. A 10-day old male presents with bilious emesis. What is the most likely diagnosis:**

- a. Appendicitis.
- b. Pyloric stenosis.
- c. Malrotation with midgut volvulus.
- d. Feeding intolerance.

Answer: c.

**33. A 21-month-old is seen because of intermittent abdominal pain that causes him to become still while drawing up his legs. He also presents with irritability & vomiting that initially was clear then become bilious. The child is lethargic between the pain episodes and he passes dark red stool. Abdomen is mildly tender with an ill-defined mass in upper right quadrant.**

**What is most likely diagnosis:**

- a. Intussusception.
- b. Dysentery.
- c. Acute appendicitis.
- d. Constipation.

Answer: a.

**34. A 1-day-old male born at home is brought to the ER because of bilious vomiting, irritability, poor feeding, lethargy and an acute onset of rectal bleeding. Examination shows a temperature of 38°C, pulse of 170, evidence of poor perfusion and a distended abdomen.**

**What is the most appropriate next step in management:**

- a. Plain abdomen x-ray erect.
- b. IV normal saline.
- c. Nasogastric tube suction.
- d. All of the above.

Answer: d.

**35. Complications of gastroenteritis include all, except:**

- a. Dehydration.
- b. Ascites
- c. Lactose intolerance.
- d. Malnutrition.

Answer: b.

**36. Which is true about acidosis following severe gastroenteritis:**

- a. Acidosis is more common than alkalosis.
- b. Acidosis is especially noticed when diarrhoea is severe.
- c. Metabolic acidosis is associated with increased rate and depth of respiration.
- d. All the above.

Answer: d.

**37. A mother complained that her 2-month old boy is not putting on weight because he has persistent projectile vomiting that follows each meal. On examination, there was an olive like mass on palpating his upper abdomen. What is your diagnosis?**

- a. Umbilical hernia.
- b. Congenital pyloric stenosis.
- c. Rumination.
- d. None of the above.

Answer: b.

**38. What investigation do you recommend?**

- a. Abdominal ultrasound.
- b. Endoscopy.
- c. Barium enema.
- d. None of the above.

Answer: a.

**39. Causes of non-infective diarrhea include all except:**

- a. Hypothyroidism.
- b. Hirschsprung's disease.
- c. Malabsorption.
- d. Dietary errors.

Answer: a.

**40. Which of the following maybe a pre-renal cause for acute renal failure:**

- a. Bladder stones.
- b. Gastroenteritis.
- c. Immune thrombocytopenic purpura.
- d. Glomerulonephritis.

Answer: b.

**41. The commonest electrolyte and acid/base disturbance in acute diarrhea include all the following, except:**

- a. Hyponatremia.
- b. Hypokalemia.
- c. Acidosis.

- d. Alkalosis.

Answer: d.

**42. All the following are expected in hypertonic dehydration, except:**

- a. Moist tongue.
- b. Serum sodium above 150 mEq/L.
- c. Water loss more than sodium loss.
- d. Water shifts from IC compartment to EC compartment.

Answer: a.

**43. Watery diarrhea is caused by all except:**

- a. Campylobacter.
- b. Giardiasis.
- c. Cholera.
- d. Rotavirus.

Answer: a.

**44. Causes of hypokalemia include:**

- a. Diarrhea.
- b. Vomiting.
- c. Inhaled salbutamol.
- d. All of the above.

Answer: d.

**45. Minimal fluid requirement of a 6-month-old infant with mild diarrhea is:**

- a. 50mUkg.
- b. 75mUkg.
- c. 150mUkg.
- d. 300mUkg.

Answer: c.

**46. The solution that is used in the deficit therapy during IV rehydration of a patient with hyponatremic dehydration is glucose : saline:**

- a. 1:1.
- b. 2:1.
- c. 3:1.
- d. 4:1.

Answer: a.

**47. Which of the following is not seen in an infant with intussusception:**

- a. Red currant jelly stool.
- b. Bile-stained vomiting.
- c. String sign in barium meal.
- d. Coil spring appearance in barium enema.

Answer: c.

**48. Causes of chronic diarrhea include all except:**

- a. Celiac disease.
- b. Cystic fibrosis.
- c. Tuberculous enteritis.

- d. Enterobiasis.

Answer: d.

**49. A 2-year-old child with diarrhea of more than 1 month.**

**I. The patient suffers from:**

- a. Gastroenteritis.
- b. Persistent diarrhea.
- c. Chronic diarrhea.
- d. Dysentery.

Answer: c.

**II. The cause of this condition maybe:**

- a. Rotavirus.
- b. Drug-induced diarrhea.
- c. Celiac disease.
- d. Parenteral diarrhea.

Answer: c.

**50. One of the following is correct about enterotoxigenic diarrhea:**

- a. The bacteria adhere to intestinal mucosa without penetration.
- b. Produces toxins which lead to exudation of serum and blood.
- c. Fluid and electrolyte disturbances are rare.
- d. Shigella is the best example of this type.

Answer: a.

**51. A 3-week-old, first born male infant is seen in casualty with the complaint of projectile vomiting which is not bile stained. He appears to be hungry all the time and has lost weight since his 2 weeks checkup, blood gas analysis reveals metabolic alkalosis.**

**I. What is the most likely diagnosis:**

- a. Gastroenteritis.
- b. Sepsis.
- c. Pyloric stenosis.
- d. Overfeeding.

Answer: c.

**II. Diagnostic physical finding of this condition is:**

- a. Abdominal tenderness.
- b. Abdominal distension.
- c. Hyperactive bowel sounds.
- d. Olive shaped mass in upper abdomen.

Answer: d.

**52. Which of the following tends to cause bloody diarrhea:**

- a. Cholera.
- b. Entero-toxigenic E. coli.
- c. Shigella.
- d. Rota-virus.

Answer: c.

**53. One-year-child presented for the first time with bloody diarrhea. His pulse and blood pressure were normal. No other sites of bleeding. Examination revealed no abdominal masses. Your investigations should initially include all the following, except:**

- a. Stool analysis.
- b. Coagulation profile.
- c. Colonoscopy.
- d. Platelet count.

Answer: c.

**54. The common type of electrolyte acid-base disturbance in acute diarrhea except:**

- a. Hyponatremia
- b. Hypokalemia
- c. Acidosis
- d. Alkalosis

Answer: d.

**55. An important complication of pyloric stenosis is:**

- a. Metabolic acidosis.
- b. Hypochloremic alkalosis.
- c. Hypochloremic acidosis.
- d. Hyperchloremic alkalosis.

Answer: b.

**56. In viral gastroenteritis, which is not a common complication:**

- a. Prerenal failure.
- b. Dehydration.
- c. Shock.
- d. Septicemia.

Answer: d.

**57. A 9-month-old child is referred with pallor, vomiting and diarrhea. He became unwell 48 hours ago and has rapidly deteriorated. He has wet his nappy once in the past 24 hours. He has cool mottled peripheries and a capillary refill time of 4 seconds. Pulses are equal in all 4 limbs. He responds weakly to voice. His abdomen is soft and skin turgor is reduced.**

**I. What is the most likely type of shock:**

- a. Cardiogenic.
- b. Distributive.
- c. Hypovolemic.
- d. Septic.

Answer: c.

**II. What is the appropriate plan of therapy:**

- a. IV fluids.
- b. Diuretics.
- c. Digoxin.
- d. Antibiotics.

Answer: a.

**58. After reconstitution with water, potassium conc. in ORS is:**

- a. 20 mEq/L.
- b. 30 mEq/L.
- c. 80 mEq/L.
- d. 90 mEq/L.

Answer: a.

**59. During rehydration of a child who weighs 17 kg, the amount of maintenance therapy will be:**

- a. 1250 ml.
- b. 1350 ml.
- c. 1500 ml.
- d. 1700 ml.

Answer: b.

**60. Which of the following statements about congenital hypertrophic pyloric stenosis is not true:**

- a. Usually presents between 2-7 weeks of age.
- b. More common in boys.
- c. Vomiting is projectile and bile-stained.
- d. Results in Hypochloremic alkalosis.

Answer: c.

**61. The patient is described to be hypernatremic when his serum sodium is above:**

- a. 130 mEq/L.
- b. 140 mEq/L.
- c. 150 mEq/L.
- d. 160 mEq/L.

Answer: c.

**62. During an acute attack of gastroenteritis, a 14 kg boy lost 520 gms of his weight, accordingly he is believed to be:**

- a. Not dehydrated.
- b. Mildly dehydrated.
- c. Moderately dehydrated.
- d. Severely dehydrated.

Answer: b.

**63. A 7 month old infant presented to your clinic with recurrent attacks of vomiting since age of 2 weeks. The child is still growing well and the mother state that condition is now improving. Diagnosis may be**

- a. Pyloric stenosis.
- b. Duodenal atresia.
- c. Hiatus hernia.
- d. GERD.

Answer: d.

**64. During rehydration of a child who weighs 15 kg, the amount of maintenance therapy will be:**

- a. 1250 ml.
- b. 1350 ml.
- c. 1500 ml.
- d. 1700 ml.

Answer: a.

**65. The patient is described to be hyponatremic when his serum sodium is below:**

- a. 130 mEq/L.
- b. 140 mEq/L.
- c. 150 mEq/L.
- d. 160 mEq/L.

Answer: a.

**66. A 4-week-old first born male with vomiting is suspected of having pyloric stenosis. At the time you examine patient, physical examination results are normal. The best way to demonstrate abnormal findings is:**

- a. Keep the patient NPO.
- b. Give IV glucagon.
- c. Feed the infant (test feeds).
- d. Examine the infant at rest.

Answer: c.

**67. ORS is used for children with gastroenteritis, except:**

- a. High fever.
- b. Shigella dysentery.
- c. Ileus & coma.
- d. Mild dehydration.

Answer: c.

**68. Standard ORS contains:**

- a.  $\text{Na}^+$  50 mmol/L.
- b.  $\text{K}^+$  20 mmol/L.
- c.  $\text{Cl}^-$  30 mmol/L.
- d. Glucose 160 mmol/L.

Answer: b.

**69. A male infant (weight 4.2 kg) is admitted at age of 4 weeks with one week history of forceful vomiting after feeds. He is alert and eager for food but exhibits a loss of skin elasticity and has apparent distension in the left hypochondrium.**

**I. What is the likely diagnosis:**

- a. Hiatus hernia.
- b. Congenital hypertrophic pyloric stenosis.
- c. Duodenal atresia.
- d. Esophageal atresia.

Answer: b.



**II. Which of the following is true about this infant:**

- a. He has hypertonic dehydration.
- b. Constipation is usual.
- c. Initial fluid therapy should be glucose 5%.
- d. Anti-cholinergic drug before feeds is useful.

Answer: b.

**70. Dysentery is caused by:**

- a. Enterotoxigenic E. coli.
- b. Amoebiasis.
- c. Giardiasis.
- d. Rotavirus.

Answer: b.

**71. During an acute attack of gastroenteritis, a 20 kg boy lost 700 gms of his weight, accordingly he is believed to be:**

- a. Not dehydrated.
- b. Mildly dehydrated.
- c. Moderately dehydrated.
- d. Severely dehydrated.

Answer: b.

**72. During an acute attack of gastroenteritis, a 16 kg boy lost 1280 gms of his weight, accordingly he is believed to be:**

- a. Not dehydrated.
- b. Mildly dehydrated.
- c. Moderately dehydrated.
- d. Severely dehydrated.

Answer: c.

**73. When serum sodium is 152 mEq/L, the patient is described to be:**

- a. Isonatremic.
- b. Hypernatremic.
- c. Hyponatremic.
- d. Dehydrated.

Answer: b.

**74. Which of the following about CHPS is wrong:**

- a. More common in boys.
- b. Presents in the first 7 days of life.
- c. Causes projectile, non-bile-stained vomitus.
- d. Pyloric olive mass is palpable in right upper quadrant of abdomen.

Answer: b.

**75. After reconstitution with water, chloride conc. in ORS is:**

- a. 20 mEq/L.
- b. 30 mEq/L.
- c. 80 mEq/L.
- d. 90 mEq/L.

Answer: c.

# Hepatology

---

## MCQ:

---

**1. All of the following are consequences of cholestasis except:**

- a. Deficiency of vitamin A, D and K.
- b. Dark colored stool.
- c. Fat malabsorption.
- d. Intense pruritus.

Answer: b.

**2. Concerning viral hepatitis as a primary illness:**

- a. There are 4 famous hepatotropic viruses.
- b. Hepatitis A virus is a DNA virus.
- c. Hepatitis D virus is transmitted by feco-oral route.
- d. The incubation period of hepatitis B virus is 50-150 days.

Answer: d.

**3. As regards viral hepatitis, which of the following is not correct:**

- a. The incubation period of hepatitis B is between 2-6 months.
- b. Till today, there is no vaccine available for hepatitis C.
- c. Hepatitis A can't be prevented by vaccination.
- d. Chronicity is not likely with hepatitis A and hepatitis E.

Answer: c.

**4. A 5 year old boy presented to ER with disturbed level of consciousness, persistent vomiting with blood-stained vomitus and progressive jaundice of 2 days duration. On examination, the liver was enlarged & tender, and a lot of bruises are seen scattered over his skin. Lab results showed elevated serum transferases (AST & ALT), elevated blood ammonia, low serum albumin, low blood sugar & prolonged prothrombin time (PT).**

**I. Which of the following describes the current boy's situation?**

- a. Acute viral hepatitis.
- b. Acute hepatic failure.
- c. Coma for differential diagnosis.
- d. Acute hemolytic crisis.

Answer: b.

**II. Reduction of blood ammonia can be achieved by all of the following except:**

- a. Neomycin (oral).
- b. Lactulose (oral or enema).
- c. Reduction of protein intake.
- d. IV vitamin K.

Answer: d.

**5. The incubation period of hepatitis B is:**

- a. 2-6 days.
- b. 2-6 weeks.
- c. 2-6 months.
- d. None of the above.

Answer: c.

**6. Which of the following diseases is not yet vaccine preventable?**

- a. Hepatitis A.
- b. Hepatitis B.
- c. Hepatitis C.
- d. Rabies.

Answer: c.

**7. As regards viral hepatitis, which of the following is correct:**

- a. Hepatitis B is not associated with carrier state.
- b. Anti-HAV IgM antibodies indicate recent infection.
- c. Hepatitis A can't be prevented by vaccination.
- d. The incubation period of hepatitis A is 2-6 months.

Answer: b.

**8. A 3-year-old girl presented to toxicology center after accidentally ingesting 12 tablets of paracetamol (500 mg/tablet). On examination she had persistent vomiting, disturbed level of consciousness, deeply yellow sclera and hematemesis. Urine is normal.**

**I. The clinical data suggests that the intoxication apparently caused:**

- a. Acute liver cell failure.
- b. Acute renal failure.
- c. Acute heart failure.
- d. Acute pancreatitis.

Answer: a.

**II. Which of the following is not expected in this baby?**

- a. Elevated serum transferases (AST & ALT).
- b. Normal serum bilirubin.
- c. Elevated blood ammonia.
- d. Prolonged prothrombin time.

Answer: b.

**9. Which of the following is not among the laboratory evidences of acute liver injury:**

- a. Hyperglycemia.
- b. Hypoalbuminemia.
- c. High blood ammonia.
- d. INR= 2, uncorrectable with vitamin K.

Answer: a.

**10. Important liver function includes:**

- a. Maintenance of blood glucose concentration.
- b. Excretion of nitrogen waste as ammonia.
- c. Control of insulin release.
- d. Production of gamma globulin.

Answer: a.

**11. The incubation period of hepatitis A is:**

- a. One week.
- b. 2 to 6 weeks.
- c. 2 to 6 months.
- d. 3 months.

Answer: b.

**12. Fulminant hepatitis is characterized by all of the following, except:**

- a. Serum bilirubin above 10 mg/dl.
- b. Serum bilirubin below 3 mg/dl.
- c. Blood ammonia above 150 mcg/dl.
- d. Positive PCR.

Answer: b.

**13. The usual incubation period of viral hepatitis A is:**

- a. 8-13 days.
- b. 20-90 days.
- c. 50-150 days.
- d. 15-40 days.

Answer: d.

**14. Fulminant hepatitis is characterized by:**

- a. Vasculopathy.
- b. Encephalopathy.
- c. Peripheral neuropathy.
- d. Retinopathy.

Answer: b.

**15. Hepatomegaly is not a feature of:**

- a. Heart failure.
- b. Aplastic anemia.
- c. Gaucher disease.
- d. Chronic hemolytic anemia.

Answer: b.

**16. One of the following is commonly seen in liver cell failure:**

- a. Advanced bone age.
- b. Encephalopathy.
- c. Hypoammonemia.
- d. Spooning of nails.

Answer: b.

**17. A 7-year-old boy presents with malaise, nausea, vomiting, loss of appetite, and fever with chills for the past week. He has had tea-colored urine for one day. On examination, he is jaundiced. There is tenderness in right hypochondrium and an enlarged soft liver about 3 cm below the right costal margin. Which of the following is an expected finding?**

- a. Severe pallor.
- b. Manifestations of heart failure.
- c. Markedly elevated liver enzymes.
- d. Gall stones.

Answer: c.

**18. Liver cell failure is characterized by all the following, except:**

- a. Gynecomastia.
- b. Hypoammonemia.
- c. Encephalopathy.
- d. Bad oral smell.

Answer: b.

**19. As regards acute viral hepatitis:**

- a. Hepatitis C is transmitted by feco-oral route.
- b. Incubation period of hepatitis A is 2-6 months.
- c. Hepatitis B is not associated with carrier state.
- d. Hepatitis A can be prevented by vaccination.

Answer: d.

**20. Which of the following is true about hepatitis B virus:**

- a. It's an RNA virus.
- b. It's transmitted by feco-oral transmission.
- c. There is no available vaccine against hepatitis B.
- d. Hepatitis B surface antibody is a protective antibody.

Answer: d.

**21. Which of the following is a cause of post-hepatic portal hypertension:**

- a. Veno-occlusive disease.
- b. Sclerosing cholangitis.
- c. Congenital hepatic fibrosis.
- d. Portal vein thrombosis.

Answer: a.

**22. Which of the following is not a manifestation of portal hypertension:**

- a. Splenomegaly.
- b. Ascites.
- c. Dilated anterior abdominal wall veins.
- d. Hemoptysis.

Answer: d.

**23. Post-hepatic causes of portal hypertension include all except:**

- a. Budd Chiari syndrome.
- b. Galactosemia.
- c. Pericardial effusion.

- d. Congestive heart failure.

Answer: b.

**24. Emergency treatment of esophageal varices includes:**

- a. Vitamin C.
- b. Nasogastric tube placement.
- c. Irrigation of stomach by hot saline.
- d. Platelet transfusion.

Answer: b.

**25. All are compatible with diagnosis of portal hypertension, except:**

- a. History of exchange transfusion.
- b. Hematemesis.
- c. Hepatitis A infection.
- d. Iron deficiency anemia.

Answer: c.

**26. Intra-hepatic portal hypertension maybe due to:**

- a. Umbilical vein catheterization.
- b. Budd-Chiari syndrome.
- c. Wilson disease.
- d. Constrictive pericarditis.

Answer: c.

**27. Pre-hepatic portal hypertension maybe due to:**

- a. Umbilical sepsis.
- b. Wilson disease.
- c. Budd Chiari syndrome.
- d. Autoimmune hepatitis.

Answer: a.

**28. Post-hepatic causes of portal hypertension include:**

- a. Umbilical sepsis.
- b. Wilson disease.
- c. Budd Chiari syndrome.
- d. Autoimmune hepatitis.

Answer: c.

**29. Splenic venous thrombosis causes:**

- a. No portal hypertension.
- b. Pre-hepatic portal hypertension.
- c. Intra-hepatic portal hypertension.
- d. Post-hepatic portal hypertension.

Answer: b.

**30. Veno-occlusive disease causes:**

- a. No portal hypertension.
- b. Pre-hepatic hypertension.
- c. Intra-hepatic hypertension.
- d. Post-hepatic hypertension.

Answer: c.

**31. In Wilson disease, one of the following is not correct:**

- a. Low serum ceruloplasmin.
- b. Low urinary copper excretion.
- c. Slit lamp examination may reveal Kayser-Fleischer ring.
- d. Copper chelating agents are the main treatment.

Answer: b.

**32. Emergency treatment of esophageal varices includes:**

- a. Blood transfusion.
- b. Nasogastric tube placement.
- c. Vitamin K.
- d. All of the above.

Answer: d.

**33. The supra-hepatic portal hypertension maybe due to:**

- a. Umbilical catheterization.
- b. Viral B hepatitis.
- c. Bilharziasis.
- d. Budd Chiari syndrome.

Answer: d.

**34. The following are causes of ascites, except:**

- a. Malnutrition.
- b. Congestive heart failure.
- c. Portal hypertension.
- d. Nephrotic syndrome.

Answer: a.

**35. 1-months-old term infant has persistent jaundice. His stools were green 2 weeks ago and now are pale in color. Physical examination findings are unremarkable, except for a liver that is palpable 2 cm below the costal margin. The infant's total bilirubin is 6.1 mg/dl and direct bilirubin is 4.2 mg/dl.**

**I. The most likely diagnosis is:**

- a. Biliary atresia.
- b. Hypothyroidism.
- c. Congenital spherocytosis.
- d. Wilson disease.

Answer: a.

**II. The initial step of management is:**

- a. Refer to ophthalmologic consultation.
- b. Give parenteral vitamin K.
- c. Order a complete blood count.
- d. Start thyroxine therapy.

Answer: b.



**36. A 6-week-old boy was referred from the neonatologist to the hepatology clinic with a provisional diagnosis of prolonged neonatal jaundice. According to the mother, the jaundice was recognized on the 3<sup>rd</sup> day of life. However, she believes that in the last few weeks, the urine is getting darker, stool color is becoming more pale and the jaundice is becoming more intense. On examination, the liver is enlarged 4 cm below the right costal margin, but not tender. Total serum bilirubin was 16 mg/dl with 80% of the direct type.**

**I. All of the following can be expected in this infant, except:**

- a. Thiamin deficiency.
- b. Pruritus.
- c. Fat malabsorption.
- d. Progressive liver damage.

Answer: a.

**II. HIDA scan is used to:**

- a. Accurately assess the size of the liver.
- b. Accurately assess the liver cell functions.
- c. Assess dye delivery to the intestine.
- d. Replace the percutaneous liver biopsy.

Answer: c.

**37. Serum ceruloplasmin and urinary copper excretion are done to diagnose:**

- a. Celiac disease.
- b. Wilson disease.
- c. Niemann-Pick disease.
- d. Tyrosinemia.

Answer: b.

**38. A 4-year-old girl presented to the ER by her mother who was worried because of a recently noticed dark-colored urine. The mother stated that her kid had low grade fever, nausea, vomiting, anorexia and recurring abdominal pain in the 5 days that preceded the onset of the dark urine. On examination, the girl was jaundiced. Her liver was enlarged and tender. Serum transferases (ALT and AST) were elevated and serum bilirubin was 12 mg/dl. The doctor asked for anti-HAV antibodies.**

**I. The class of anti-HAV antibodies that help in diagnosis is:**

- a. IgG.
- b. IgA.
- c. IgM.
- d. IgE.

Answer: c.

**II. The icteric stage of hepatitis A lasts:**

- a. Less than 1 week.
- b. 2-4 weeks.
- c. 6 weeks.
- d. None of the above.

Answer: b.

**39. All the following may be seen in cases of cholestasis, except:**

- a. Deficiency of vitamin B<sub>6</sub>.
- b. Pruritus (skin itching).
- c. Fat malabsorption.
- d. Pale clay-colored stool.

Answer: a.

**40. A full-term infant presented at the age of 5 weeks with poor feeding, vomiting, significant pallor, jaundice and dark urine. History revealed bruising over forehead and shoulders, although he was given 1 mg vitamin K IM at delivery room. Hemoglobin 8.1 g/dl, platelet count 410,000/cubic ml, prothrombin time 27 seconds (normally 12-14 seconds), total serum bilirubin 18 mg/dl, direct bilirubin 15.4 mg/dl. The gallbladder was not visualized by ultrasound. Radionuclide scan of liver showed good hepatic uptake of isotope with no excretion into the intestine.**

**I. This baby is likely to have:**

- a. Choledochal cyst.
- b. Alpha-1 anti-trypsin deficiency.
- c. Extra-hepatic biliary atresia.
- d. Crigler-Najjar syndrome.

Answer: c.

**II. The stool of this patient is expected to be:**

- a. Pale.
- b. Dark.
- c. Bloody.
- d. None of the above.

Answer: a.

**41. Which of the following should be avoided in an infant with galactosemia:**

- a. Egg.
- b. Rice.
- c. Milk.
- d. Wheat.

Answer: c.

**42. Incubation period of hepatitis A virus is:**

- a. 2 weeks – 2 months.
- b. 6 weeks – 6 months.
- c. 2 days – 2 weeks.
- d. 6 days – 6 weeks.

Answer: a.

**43. A 14-day-old male was evaluated because of yellowish skin and sclera. The infant was full-term breast fed. Examination showed normal vital signs, jaundice and slightly protuberant abdomen. Liver was palpable 2-3 cm below costal margin and there was no splenomegaly or obvious masses. The laboratory evaluation showed a total bilirubin of 17.1 mg/dl with a direct bilirubin 7.1 mg/dl. Diagnostic workup would include all the following, except:**

- a. Glucose-6-phosphate dehydrogenase.
- b. Gamma glutamyl transferase.
- c. Alpha 1 antitrypsin level.
- d. Alanine aminotransferase.

Answer: a.

**44. One of the following is true about cholestasis:**

- a. The cause maybe pre-hepatic, hepatic or post-hepatic.
- b. Diagnosis implies elevated serum conjugated bilirubin more than 50% of total bilirubin.
- c. Differentiation between neonatal hepatitis and biliary atresia can be difficult.
- d. Surgical treatment is preferably delayed to 6 months of age.

Answer: c.

**45. Cholestasis is not characterized by:**

- a. Pale clay colored stool.
- b. Vitamin E deficiency.
- c. Increased serum albumin.
- d. Increased total serum bilirubin.

Answer: c.

**46. A 12-week-old infant presented with poor feeding and vomiting and a history of bruising on his forehead and shoulders. His urine had become dark and stools pale. He was pale, jaundiced, had several bruises and hepatomegaly. Investigations showed bilirubin of 11 mg/dl, 80% conjugated. The radionuclide scan showed no excretion at 24 hours and a liver biopsy was done.**

**I. What is the most likely diagnosis:**

- a. Biliary atresia.
- b. Neonatal hepatitis.
- c. Choledochal cyst.
- d. Hypothyroidism.

Answer: a.

**II. The cause of bruising in this patient is:**

- a. Hypoprothrombinemia.
- b. Thrombocytopenia.
- c. Hyperbilirubinemia.
- d. Vitamin E malabsorption.

Answer: a.

**47. Cholestasis can be diagnosed properly by all the following, except:**

- a. Liver enzymes.
- b. Abdominal sonar.
- c. Liver biopsy.

- d. Ascitic tap.

Answer: d.

**48. All the following maybe seen in case of cholestasis, except:**

- a. Deficiency of fat soluble vitamins.
- b. Dark colored urine.
- c. Fat malabsorption.
- d. Dark colored stool.

Answer: d.

**49. A 9-year-old male was referred to Abu El-Reish hospital with general weakness, easy fatigability, recurrent epistaxis and easy breakability. On examination, the child was jaundiced and slightly pale. The liver was enlarged 4.5 cm below right costal margin and the spleen was palpable 3 cm below left costal margin. Both liver and spleen were firm and not tender. No ascites, palmar erythema or spider naevi. According to the mother, the jaundice was present since 9 months with variable intensities. His GP, who saw the child at the beginning of illness, gave diagnosis of viral A hepatitis on clinical grounds and requested no laboratory investigations.**

**A battery of investigations were requested and showed the following:**

- *CBC: Hemoglobin 11 gm/dl, differential white cell count and platelet count are normal.*
- *Total serum bilirubin 8 mg/dl, 75% were in the direct form.*
- *Aminotransferases (AST & ALT) markedly elevated.*
- *Alkaline phosphatase and Gamma glutamyl transpeptidase (GGT) are high.*
- *Prothrombin time (PT) 22 seconds (Normal 12-14 seconds).*
- *Prothrombin concentration (PC) 54%.*
- *Serologic markers for Hepatitis A, B, C and D were negative.*
- *Hypergammaglobulinemia.*
- *Autoantibodies in serum are positive.*
- *Serum ceruloplasmin and urinary copper are normal.*

**I. The most likely diagnosis is:**

- a. Viral C hepatitis.
- b. Autoimmune hepatitis.
- c. Wilson disease.
- d. Glycogen storage disease.

Answer: b.

**II. Which of the following is likely to be used or done at this stage:**

- a. Interferon and ribavirin.
- b. Azathioprine and prednisolone.
- c. D-penicillamine.
- d. Liver transplantation.

Answer: b.

**50. A 4-week-old boy was brought to his pediatrician due to persistence of neonatal jaundice. On examination, the liver was enlarged but not tender and the spleen was normal. The urine was dark and the stools were clay colored. Total serum bilirubin was 14 mg/dl, 80% of which were as direct bilirubin. The test of reducing substances in urine was positive.**

**I. The most likely diagnosis is:**

- a. Idiopathic hepatitis.
- b. Biliary atresia.
- c. Galactosemia.
- d. Tyrosinemia.

Answer: c.

**II. The following is not expected in this patient:**

- a. Deficiency of fat soluble vitamins.
- b. Cataract.
- c. Continuation of breast feeding is encouraged.
- d. Pruritus.

Answer: c.

# Nephrology

---

## MCQ:

---

**1. The presence of dysuria, urgency and frequency are suggestive of:**

- a. Acute glomerulonephritis.
- b. Acute cystitis.
- c. Acute pyelonephritis.
- d. Acute renal failure.

Answer: b.

**2. A 10-year-old boy presented with fever of 39.2 C, chills and abdominal pain in the flanks that started 3 days ago. CBC showed a TLC of 28000/cm, with band cells 25% of total. CRP was > 96 mg /dl, urine was turbid but its color was normal. Urine culture was +ve with a bacterial colony count of > 1000 CFU/ml in a freshly voided clean urine catch. What is the most likely diagnosis:**

- a. Acute cystitis.
- b. Acute glomerulonephritis.
- c. Acute pyelonephritis.
- d. Acute pancreatitis.

Answer: c.

**3. The duration of antibiotic therapy in this condition is usually:**

- a. 5-7 days.
- b. 10-14 days.
- c. 3 weeks.
- d. 4-6 weeks.

Answer: b.

**4. A 9-year -old -boy presented with headache, reddish urine and slight puffiness of both eyelids that started since 4 days. On examination, the oral temperature was 37.9 degrees, pulse 90/ min, BP 140/90. Abdominal & chest examinations were normal. What is the most likely diagnosis:**

- a. Acute cystitis.
- b. Acute glomerulonephritis.
- c. Acute pyelonephritis.
- d. Viral hepatitis.

Answer: b.

**5. Which of the following is unexpected in this case:**

- a. Hematuria.
- b. Proteinuria.
- c. Polyuria.
- d. Red cell casts in urine.

Answer: c.

**6. A 7-year-old boy presented with significant puffiness of both eyelids that started since 2 days. On examination, the oral temperature was 37.9 degrees, pulse 90/min BP 95/65. Respiratory rate was 20/min. Both legs were swollen with pitting edema. What is the most likely diagnosis:**

- a. Nephrotic syndrome.
- b. Acute glomerulonephritis.
- c. Acute pyelonephritis.
- d. Acute renal failure.

Answer: a.

**7. In chronic renal failure all the following are true except:**

- a. Anemia.
- b. Specific gravity of urine is 1030.
- c. Increased serum creatinine.
- d. Blood urea nitrogen is elevated.

Answer: b.

**8. Chronic kidney disease is defined as the following:**

- a. Stage one means GFR before 50 ml/min/1.7m<sup>2</sup>.
- b. Stage 4 means GFR before 60 ml/min/1.7m<sup>2</sup>.
- c. Stage 2 means GFR before 60 ml/min/1.7m<sup>2</sup>.
- d. Stage 1 means GFR before 50 ml/min/1.7m<sup>2</sup>.

Answer: b.

**9. All of the following complicate chronic renal failure except:**

- a. Hypertension encephalopathy.
- b. Bleeding tendency.
- c. Pulmonary embolism.
- d. Rickets.

Answer: c.

**10. 14 years old girl is complaining from several years period to have progressive renal insufficiency. She now has an 80% reduction of GFR and elevated levels of blood urea & creatinine. Which of the following is she also likely to demonstrate:**

- a. Polycythemia.
- b. Polyuria.
- c. Frequent episodes of hypoglycemia.
- d. Metabolic alkalosis.

Answer: b.

**11. A 12 years old boy present with headache & blood pressure 210/110, there is no history of recent infection. The urine analysis is uncomfortable. The next step in the management of the patient is do:**

- a. Measure serum complement.
- b. Perform voiding cysto-urethrogram.
- c. Measure streptococcal titer.
- d. Perform renal angiogram (renal artery stenosis).

Answer: d.

**12. An 8 years old boy comes complaining of bed wetting for the past 2 weeks he has previously been continent on examination his height below 5th percentile, his Hb is 6.5%. What the most important next step:**

- a. Check the blood.
- b. Give oral iron.
- c. Try fluid restriction and rewarding for dry night.
- d. Check BUN and creatinine.

Answer: d.

**13. A 4-year-old boy whom past medical history is +ve for 3 UTI presents with Bp 135/90 renal scan show bilateral renal scars. What should have been done to prevent this situation:**

- a. Give antibiotic for 3-5 days for each UTI.
- b. Do cysto-urethrography and give prophylactic antibiotic.
- c. Abdominal U/S every 3 months.
- d. Prescribe urinary effervescent.

Answer: b.

**14. In nocturnal enuresis:**

- a. Prognosis is worse than that of diurnal enuresis.
- b. Girls more affected than boys.
- c. Development delay in acquiring sphincter exam.
- d. Most children are psychology affected.

Answer: c.

**15. In pediatric ARF:**

- a. Very poor prognosis.
- b. 3 stages.
- c. RF stage 2 → creatinine > 4 mg/dl.
- d. Renal loss is failure > 3 wks.

Answer: d.

**16. Normal urine output /kg/hr at infancy:**

- a. 1 ml.
- b. 3 ml.
- c. 5.5 ml.
- d. 4.5 ml.

Answer: b.

**17. Indication of dialysis in ARF including all except:**

- a. Severe urea.
- b. Hypokalemia.
- c. Fluid overload.
- d. Metabolic acidosis.

Answer: b.



**18. Clinical evident renal failure GFR is .... ml/min/1.7 m<sup>2</sup>:**

- a. 40.
- b. 10.
- c. 90.
- d. 60.

Answer: d.

**19. Rife is classification of:**

- a. Acute R.F.
- b. Chronic R.F.
- c. Depend on serum urea level.
- d. None of the above.

Answer: a.

**20. In ARF one test is of poor value:**

- a. Stool culture.
- b. Urine microscopy.
- c. Blood film and coagulation screen.
- d. Renal ultrasound scan.

Answer: a.

**21. True statement about nocturnal enuresis is:**

- a. More in children.
- b. Not related to genetic/hereditary factors.
- c. More serious problem than diurnal enuresis.
- d. Should be investigated by renal Isotope scan.

Answer: a.

**22. In ARF, All develops except:**

- a. Hyperkalemia.
- b. Increase serum creatinine.
- c. Hyperphosphatemia.
- d. Metabolic alkalosis.

Answer: d.

**23. ARF consequences include all, Except:**

- a. Metabolic alkalosis.
- b. Hyperkalemia.
- c. Hypophosphatemia.
- d. High creatinine.

Answer: a.

**24. Renal causes of ARF include all, except:**

- a. Acute glomerulonephritis.
- b. Ureteric stones.
- c. Aminoglycoside antibiotic.
- d. Hemoglobinuria.

Answer: Both b & d are correct!

**25. Nocturnal enuresis include all, except:**

- a. In most children, on underlying organic cause is present.
- b. +ve family history is present.
- c. Can be caused by physiological stress of anxiety.
- d. Punishment of child may worsen condition.

Answer: a.

**26. True about nocturnal enuresis is:**

- a. More common in girls.
- b. May be initial presentation of juv. DM.
- c. Represent more serious problem than diurnal.
- d. Should be investigated by renal isotype.

Answer: b.

# Neurology

---

## MCQ:

---

**1. Which is correct in absence seizures:**

- a. poor prognosis
- b. attack triggered by breath holding 1-2 min
- c. impaired consciousness for 2-20 sec.
- d. genetic predisposition has no role

Answer: c.

**2. MR child is trainable if IQ: (2015)**

- a. <20
- b. 20-35
- c. 35-50
- d. 50-70

Answer: c.

**3. Werdnig Hoffman is a disease of:**

- a. AHCS
- b. N. fibers
- c. N.M.J.
- d. M.S.

Answer: a.

**4. Status epilepticus is used when colonic phase of seizures exceeds:**

- a. 10 min
- b. 15 min
- c. 20 min
- d. 30 min

Answer: d.

**5. Regarding febrile convulsions which is wrong:**

- a. 2-5 % of children
- b. peak 1-2 yrs.
- c. benign febrile forms 80-85% of all
- d. can be caused by meningitis

Answer: d.

**6. Mother brought her 6-year-old child saying that he experienced sudden loss of consciousness for 6 times in the last 2 months, he falls on the ground with extended limbs and arching of the back followed by jerking, salivation & sometimes micturition, Diagnosis is:**

- a. myoclonic
- b. complex partial
- c. tonic-colonic

- d. infantile spasms

Answer: c.

**7. Worried mother brought her 5 year-old child complaining that he develops attacks of impaired consciousness without falling or any involuntary movements, in her own words; stops what he is doing for 5-20 sec. and continues his original activity as if nothing happened**

**I. The most likely diagnosis:**

- a. simple partial seizures
- b. infantile spasms
- c. absence seizures
- d. myotonic seizures

Answer: c.

**II. The condition has a characteristic:**

- a. MRI
- b. EEG
- c. CSF
- d. CBC

Answer: b.

**8. In febrile convulsions all is true except:**

- a. seen at 6 m to 5 yrs.
- b. usually lasts < 10 min
- c. long term anticonvulsant usually not needed
- d. seizures are calmly focal

Answer: d.

**9. Cause of neonatal seizures: (neonatology)**

- a. hypothermia
- b. birth asphyxia
- c. cephalhematoma
- d. vit B12 deficiency

Answer: b.

**10. Serum values that can cause neonatal seizures: (neonatology)**

- a. bicarbonate level of 22 mEq/L
- b.  $\text{Ca}^{+2} < 6.2$  mg/dL
- c. glucose < 45 mg/dL
- d.  $\text{Na}^+ < 138$  mEq/dL

Answer: b.

**11. In absence seizures:**

- a. no role of genetic predisposition
- b. child looks as vacant for 5-20 sec.
- c. bad prognosis
- d. triggered by breath hold

Answer: b.

**12. benign febrile convulsions:**

- a. age 2-5 yrs.
- b. focal tonic-clonic in nature
- c. duration < 15 min.
- d. prolonged post-ictal drowsiness

Answer: c.

**13. All's true in febrile convulsions except:**

- a. affect 25% of children
- b. peak 1-2 yrs.
- c. occurring due to rapid temp. rise
- d. usually generalized tonic-clonic

Answer: a.

**14. Abnormal EEG is seen commonly in:**

- a. cyanotic spells
- b. simple febrile seizures
- c. breath holding spells
- d. infantile spasm

Answer: d.

**15. 1.5-year-old went to bed his mother reported that he was flushed, convulsing during convulsion he deviated his eyes upwards his arms and legs started jerking & last for 1 min. temp. 39.2 0C & severe otitis media. The most likely diagnosis:**

- a. epilepsy
- b. CNS infection
- c. febrile convulsions
- d. cerebral hypoxia.

Answer: c.

**16. which investigation is indicated:**

- a. CT brain
- b. Echo
- c. EEG
- d. none of the above

Answer: d.

**17. CSF examination of bacterial meningitis classically shows:**

- a. Clear appearance.
- b. Lymphocytosis.
- c. Normal glucose level.
- d. Increased protein level.

Answer: d.

*"Cloudy appearance, polymorphs, low glucose"*

**18. Positive Kernig's sign in a child with meningitis means:**

- a. If the neck is flexed, hips and knee will be flexed.
- b. If the neck is flexed, hips and knee will be extended.
- c. Inability to straighten the leg when the hip is flexed to 90 degrees.

- d. Inability to straighten the leg when the hip is flexed to 45 degrees.

Answer: c.

**19. In a child with encephalitis, which of the following viruses has special predilection to temporal lobes:**

- a. Herpes simplex virus.
- b. Rabies virus.
- c. Mumps virus.
- d. Measles virus.

Answer: a.

**20. All of the following may be normal in cerebral palsy, except: (June, 2012)**

- a. Cognitive abilities.
- b. Sensory functions.
- c. Motor functions.
- d. Auditory functions.

Answer: c.

**21. Cerebral palsy description is as follows, except: (September, 2011)**

- a. Non progressive motor deformity.
- b. Progressive motor deficit.
- c. Perinatal insult.
- d. Maybe associated with convulsions.

Answer: b.

**22. All the following are causes of cerebral palsy, except: (September, 2008)**

- a. Rubella syndrome.
- b. Hydrocephalus.
- c. G6PD deficiency.
- d. Kernicterus.

Answer: c.

**23. All the following are characteristics of cerebral palsy, except: (June, 2009)**

- a. Non progressive motor deformity.
- b. Perinatal insult.
- c. Peripheral sensory loss.
- d. Non curable.

Answer: c.

**24. Hypotonic cerebral palsy usually presents with: (September, 2010)**

- a. Hypotonia and hyporeflexia.
- b. Hypotonia and preserved tendon reflexes.
- c. Hypertonia and hyperreflexia.
- d. Hypertonia and hyporeflexia.

Answer: b.

**25. Hemiplegic types of spastic cerebral palsy is characterized by (June, 2011):**

- a. Leg is more affected than the arm.
- b. Fisting of the affected hand is common.
- c. True bulbar palsy.

- d. Complete affection of one half of the face.

Answer: b.

**26. Cerebral palsy is characterized by: (6<sup>th</sup> October university)**

- a. Mental retardation.
- b. Motor disability.
- c. Curable.
- d. Sensory loss.

Answer: b.

**27. Werdnig-Hoffmann disease is characterized by:**

- a. An X-linked recessive disorder.
- b. Tongue fasciculations.
- c. Pseudo-hypertrophy of muscles.
- d. Subnormal mentality.

Answer: b.

**28. Werdnig-Hoffmann disease is a disease of:**

- a. Anterior horn cells.
- b. Nerve fibers.
- c. Neuromuscular junction.
- d. Muscles.

Answer: a.

**29. About hydrocephalus, which of the following statements is not correct:**

- a. It is defined as dilatation of the ventricular system of the brain.
- b. Dandy-Walker malformation causes obstructive hydrocephalus.
- c. Subarachnoid haemorrhage causes obstructive hydrocephalus.
- d. Choroid plexus papilloma causes communicating hydrocephalus.

Answer: c.

**30. 11- month old boy was brought to the neurology clinic by his parents who felt he is weaker than his sibs. In supine position, the baby's limbs were abducted and flexed. When the baby was pulled from his hands, the head lagged backwards.**

**I. All of the following can cause this condition, except:**

- a. Spastic diplegia.
- b. Atonic cerebral palsy.
- c. Werdnig-Hoffmann disease.
- d. Hereditary polyneuropathy.

Answer: a.

**II. Which of the following is not expected in this patient:**

- a. Weak cough and cry.
- b. Tongue fasciculations.
- c. Abnormal eye movement.
- d. Late respiratory paralysis.

Answer: c.

**31. Myasthenia gravis is a disease of:**

- a. Anterior horn cells.
- b. Nerve fibers.
- c. Neuromuscular junction.
- d. Muscles.

Answer: c.

**32. Which of the following causes obstructive hydrocephalus:**

- a. Cerebellar medulloblastoma.
- b. Post-meningitic subdural adhesions.
- c. Subarachnoid hemorrhage.
- d. Choroid plexus papilloma.

Answer: a.

**33. All of the following are features of Werdnig-Hoffmann disease except:**

- a. It's an autosomal recessive disease.
- b. It's one of the causes of floppy infant.
- c. Tongue fasciculations.
- d. Most cases die near adolescence with respiratory failure.

Answer: d.

**34. All of the following are signs of hydrocephalus in a month old infant except:**

- a. Upward deviation or rolling of eyes.
- b. Wide anterior fontanel.
- c. Prominent scalp veins.
- d. Separation of sutures.

Answer: a.

**35. The most common cause of obstructive hydrocephalus in an infant is:**

- a. Dandy-Walker syndrome.
- b. Meningitis.
- c. Arnold-Chiari malformation.
- d. Aqueductal stenosis.

Answer: d.

**36. Werdnig-Hoffmann is characterized by all of the following except:**

- a. X-linked recessive disorder.
- b. Respiratory paralysis.
- c. Tongue fasciculations.
- d. Normal mentality.

Answer: a.

**37. Floppy infant can be caused by any of the following except:**

- a. Congenital myopathy.
- b. Genetic syndromes.
- c. Spinal muscle atrophy.
- d. Rickets.

Answer: d.



**38. Which one of the following is a cause of communicating hydrocephalus:**

- a. Vein of Galen malformation.
- b. Dandy-Walker syndrome.
- c. Arnold-Chiari malformation.
- d. Posterior fossa subdural hematoma.

Answer: c.

**39. The mode of inheritance of Duchenne muscle dystrophy deficiency is:**

- a. Autosomal dominant
- b. Autosomal recessive
- c. X-linked dominant
- d. X-linked recessive

Answer: d.

**40. A child who presents with acute flaccid symmetrical descending paralysis is likely having:**

- a. Poliomyelitis.
- b. GBS
- c. Post-diphtheritic paralysis
- d. Transverse myelitis

Answer: c.

**41. GBS may related to :**

- a. Direct bacterial neuritis
- b. Autosomal recessive disorder.
- c. Post viral sequel.
- d. spinal cord trauma.

Answer: c.

**42. Which of the following is among the characteristics of GBS?**

- a. Usually starts with upper limb paralysis.
- b. Degeneration of the anterior horn cells
- c. paralysis is acute and symmetric
- d. The CSF white cells are increased

Answer: c.

**43. which of the following is characteristic of GBS?**

- a. paralysis is descending
- b. Degeneration of the anterior horn cells
- c. Loss of motor function within weeks.
- d. The CSF examination 2 weeks after paralysis shows increased proteins.

Answer: d.

**44. On examination 12 days after a mild upper respiratory infection, a 19 year old boy complains of weakness of the lower limbs, over several days the weakness progress to include his trunk, on physical examination, weakness is symmetrical and associated with hypotonia, which of the following is the most probable diagnosis?**

- a. muscular dystrophy
- b. GBS
- c. brain tumor

d. poliomyelitis

Answer: b.

**45. A 9-year- old child presents with acute onset of weakness which initially started in the lower limbs and was preceded 3 weeks earlier by respiratory tract infection . on examination there is hypotonia and hyporeflexia of both lower limbs , there is history of convulsion**

**the most likely diagnosis is:**

a. muscular dystrophy

b. GBS

c. brain tumor

d. poliomyelitis

Answer: b.

# Allergy

---

## MCQ:

---

**1. In atopic dermatitis (eczema), which is wrong:**

- a. Many children have positive family history of allergy.
- b. Rash is itchy.
- c. Child should avoid hot water bathes.
- d. Condition gets more worse as the child gets older.

Answer: d.

**2. The gold standard in diagnosis of food allergy is:**

- a. Skin prick tests.
- b. Specific IgE in blood.
- c. Double-blind placebo-controlled food challenge.
- d. Positive family history of allergy.

Answer: c.

**3. In food allergy, which is wrong:**

- a. Food allergies are believed to occur in about 25% of children.
- b. Food allergy maybe IgE mediated or non IgE mediated.
- c. The most common allergic food in infants are cow milk, eggs and peanuts.
- d. Food allergy may cause anaphylaxis.

Answer: a.

**4. The most important drug that maybe life-saving in a child with severe reaction to food is:**

- a. IM epinephrine (adrenaline).
- b. IM corticosteroid.
- c. IM anti-histamine.
- d. Oral corticosteroid.

Answer: a.

**5. A 12-year-old girl is seen by a pediatrician for a mild case of pneumonia. She is treated with an IM injection of penicillin. About 15 minutes later, she develops extreme itchiness, wheals over chest and extremities, and begins to wheeze and complains of difficulty breathing.**

**I. What is the most likely diagnosis:**

- a. Atopic eczema.
- b. Bronchial asthma.
- c. Foreign body inhalation.
- d. Anaphylaxis.

Answer: d.

**II. The most appropriate first step is:**

- a. Epinephrine injection.
- b. Tracheostomy.

- c. Nebulized salbutamol.
- d. Local calamine lotion.

Answer: a.

**6. A 6-month-old breast-fed girl developed dyspnea, urticarial, lip & facial swelling immediately after her 1<sup>st</sup> formula feeding.**

**I. What is the most probable diagnosis:**

- a. Lactose intolerance.
- b. Infantile eczema.
- c. G6PD.
- d. Cow milk allergy.

Answer: d.

**II. Which of the following is unexplained in the child:**

- a. Elevated serum specific IgE.
- b. +ve skin prick test.
- c. May progress to stridor & wheezing.
- d. No response to epinephrine & antihistamine.

Answer: d.

# Rheumatology

---

## MCQ:

---

- 1. A 10 years old girl presented with fever of 38.3 that was intermittent in the last 2 months. During the same period, the girl used to suffer from painful swelling of elbow, knees and small joints of the hands. accompanied by restricted movement of the affected joints, joint affection used to be symmetric. the girl used to complain of pain in the back of the neck.**

**I. What is the most likely diagnosis?**

- a. juvenile SLE
- b. systemic onset juvenile rheumatoid arthritis
- c. poly articular JRA
- d. pauciarticular JRA

Answer: b.

**II. Which of the following drugs is increasingly used early to control joint manifestation?**

- a. NASIDs
- b. Methotrexate
- c. systemic corticosteroids
- d. Intra articular steroids

Answer: c.

**2. In juvenile rheumatoid arthritis, all the following are true except:**

- a. Chronic anterior uveitis maybe a complication.
- b. Early use of methotrexate reduces joint damage.
- c. Rheumatoid factor is always positive.
- d. May affect big and small joints.

Answer: c.

# Endocrine

---

## MCQ:

---

**1. The main clinical presentation of acquired hypothyroidism include all of the following except:**

- a. Short stature.
- b. Goiter.
- c. School underachievement.
- d. Precocious puberty.

Answer: d.

**2. Which of the following is not true about primary hypothyroidism?**

- a. It is always congenital, never acquired.
- b. May be due to aplasia of thyroid gland.
- c. T3, T4 are low.
- d. TSH is high

Answer: a.

**3. All of the following may be signs of congenital hypothyroidism except: -**

- a. Diarrhea.
- b. Wide anterior fontanel.
- c. Prolonged physiologic jaundice.
- d. Abdominal distention and Umbilical hernia.

Answer: a.

**4. Which of the following is correct about congenital hypothyroidism?**

- a. The child is usually premature.
- b. Associated with advanced bone age.
- c. The majority of infants usually are normal at birth,
- d. The thyroid gland is essentially absent.

Answer: c.

**5. In congenital hypothyroidism:**

- a. Diarrhea is common.
- b. Definite diagnosis is done by thyroid biopsy.
- c. Coarse features always clear since birth.
- d. The thyroid gland may enlarge in some patients.

Answer: d.

6. 5-year-old girl complains of decreased appetite, increased urinary frequency and thirst. Her pediatrician suspects now onset of diabetes mellitus & confirms that she has elevated urine glucose & ketones.

A. The expected blood gases is:

	PH	Bicarbonate	PCO <sub>2</sub>
a.	7.05	16	52
b.	7.35	22	38
c.	7.45	26	47
d.	7.25	12	21

Answer: d (metabolic acidosis → PCO<sub>2</sub> is normal).

B. Management is:

- a. Diet containing mainly animal fat.
- b. Limitation of exercise & sports.
- c. Both.
- d. None.

Answer: d (DKA ttt → 1<sup>st</sup> saline infusion).

7. A 5-year-old girl presented to ER with abdominal pain & recurrent vomiting in the last few days. On examination, temperature is 36.8, moderately dehydrated with impaired level of consciousness. Her breathing was deep & rapid.

A. The most urgent lab test you need to request is:

- a. CT scan of abdomen.
- b. Blood ammonia.
- c. Blood sugar.
- d. CSF examination & culture.

Answer: c.

B. The child is suspected to have:

- a. Respiratory acidosis.
- b. Respiratory alkalosis.
- c. Metabolic alkalosis.
- d. Metabolic acidosis.

Answer: d.

8. 5 year-old child complained from abnormal growth & enlargement of breasts of 4 months duration. There is no other sign of puberty (no pubic hair & no axillary hair). Growth velocity & bone age are normal. (December, 2014)

A. The girl suffers from:

- a. Premature thelarche.
- b. Premature adrenarche.
- c. Pseudo-precocious puberty.
- d. True precocious puberty.

Answer: a.

**B. The physician needs to:**

- a. Reassure the parents.
- b. Ask for abdominal CT.
- c. Ask for cranial CT.
- d. Ask for hormonal study.

Answer: a.

**9. As regarding pseudo-precocious puberty: (September, 2011)**

- a. It's gonadotropin dependent.
- b. FSH & LH are elevated.
- c. Usually idiopathic.
- d. Gametogenesis is absent.

Answer: d.

**10. Which of the following is correct about type I DM? (September, 2011)**

- a. Commonly starts in the 1<sup>st</sup> year of life.
- b. Alkalosis may form the initial presentation.
- c. Oral hypoglycaemic are not effective therapy.
- d. Snacks are contraindicated in between meals.

Answer: c.

**11. One of the clinical features of type I DM is: (June, 2011)**

- a. Enuresis.
- b. Diarrhea.
- c. Weight gain.
- d. Loss of appetite.

Answer: a.

**12. The commonest cause of precocious puberty in females is:**

- a. Premature onset of normal puberty.
- b. Androgen secreting suprarenal tumor.
- c. Iatrogenic.
- d. Congenital adrenal hyperplasia.

Answer: a.

**13. Manifestations of diabetic ketoacidosis include all the following, except:**

- a. Sweating.
- b. Vomiting.
- c. Respiratory distress.
- d. Abdominal pain.

Answer: a.

**14. The clinical presenting features of DM are all except: (September, 2009)**

- a. Weight gain.
- b. Vomiting.
- c. Polydipsia.
- d. Enuresis.

Answer: a.



**15. Type I DM is characterized by all the following, except: (June, 2009)**

- a. Genetic susceptibility.
- b. Mumps & chicken pox are common triggering factors.
- c. Is treated only by insulin.
- d. Oral hypoglycaemic drugs have therapeutic role.

Answer: d.

**16. Complications of DM in children include all the following, except: (June, 2009)**

- a. Hypoglycaemic coma.
- b. Ketoacidotic coma.
- c. Ammonic coma.
- d. Skin infection.

Answer: c.

**17. Management of DKA is all the following, except:**

- a. IV fluids.
- b. IV insulin infusion.
- c. Slow IV infusion of Na bicarbonate.
- d. Continuous monitoring of blood sugar.

Answer: c.

**18. Which of the following is not correct about type I DM:**

- a. It's the most common type of DM.
- b. The onset is usually acute & rapid.
- c. It's strongly associated with obesity.
- d. Insulin dependency is life-long (permanent).

Answer: c.

**19. Diet of DM should fulfil all the following requirements, except:**

- a. Rich in fibers.
- b. Fat needs to provide 25% of total calories.
- c. Animal fat is more preferable than plant fat.
- d. Carbohydrate need to provide 55-60% of total calories.

Answer: c.

**20. Which of the following is not correct about dietary management of diabetic child:**

- a. Carbohydrates should supply less than 40% of calories.
- b. Proteins should cover 15-20% of total daily caloric intake.
- c. Fat should supply 25% of the daily total caloric intake.
- d. Food rich in fibers should be encouraged.

Answer: a.

**21. Which of the following is not correct about insulin-dependent diabetes mellitus:**

- a. It's also called type I DM.
- b. The affected child not to be encouraged to participate in sports.
- c. It's a life-long disease.
- d. The sensitivity to insulin is normal.

Answer: b.

**22. A 10-year-old girl presented to ER with abdominal pain & recurrent vomiting in the last four days. On examination, she was afebrile, moderately dehydrated with impaired consciousness . The mother said that her daughter was drinking too much water & juices in the last week. (June 2016)**

**A. The most urgent lab that you need to request is:**

- a. Blood urea & creatinine.
- b. Blood sugar.
- c. Blood ammonia.
- d. CSF examination & culture.

Answer: b.

**B. Breathing is expected to be:**

- a. Rapid & deep.
- b. Rapid & shallow.
- c. Slow & shallow.
- d. Slow & deep.

Answer: a.

**23. A 9-year-old boy complaining of nocturnal enuresis of 2 months duration. He mentioned that he becomes more thirsty & drinks more fluids than before. He lost 2 Kg in the last 6 weeks. Blood urea = 20 mg/dL. Blood creatinine = 0.4 mg/dL. pH = 7.3. (June 2016)**

**A. The most probable diagnosis is:**

- a. Chronic renal failure.
- b. Primary nocturnal enuresis.
- c. Diabetes mellitus.
- d. Diabetic ketoacidosis.

Answer: c.

**B. Which of the following is expected in this patient:**

- a. Oliguria.
- b. Polyuria.
- c. Hypervolemia.
- d. Azotemia.

Answer: b.

**24. A 7-year-old girl was brought by her mother to the paediatrician office complaining that her axillary & pubic hair was well developed. On examination, the pubic hair was given sexual maturity grade of 4 & breast SMR was 1. (June, 2016)**

**A. The most likely diagnosis is:**

- a. Premature thelarche.
- b. Premature adrenarche.
- c. True precocious puberty.
- d. Pseudo precocious puberty.

Answer: b.

**B. If this condition was associated with growth acceleration, one of the following should be suspected:**

- a. Congenital adrenal hyperplasia.
- b. Hyperpituitarism.
- c. Thyrotoxicosis.
- d. Turner syndrome.

Answer: b.

**25. Which of the following is not correct about insulin dependent DM:**

- a. Once diagnosed, it's a life-long disease.
- b. The affected child should be encouraged to participate in sports.
- c. It's also called type II DM.
- d. Sensitivity to insulin is normal.

Answer: c.

# Problem solving

## Paediatrics round – 2017/2018

---

### TEST (1):

---

**1. A 10-month-old infant presents with a 1-day history of a blanching confluent rash which started on his face and now covers his entire body. He is miserable with conjunctivitis and fever of 38.5°C. The illness started with runny nose and cough five days previously. What is the most likely diagnosis:**

- a. Scarlet fever.
- b. Sweat rash.
- c. Chicken pox.
- d. Measles.

Answer: d.

**2. A mother brings to the clinic her 4-year-old son who began complaining of right knee pain 2 weeks ago, is limping slightly, is fatigued, and has had a fever to 38.2°C. What is the most important diagnostic laboratory test to perform:**

- a. Complete blood count with differential.
- b. Sedimentation rate.
- c. Epstein-Barr virus titer.
- d. Rheumatoid factor.

Answer: a.

**3. A 12-month-old boy presents to the emergency department with a 6-hour history of vomiting, colicky abdominal pain, and irritability. On physical examination, a sausage-like mass is palpable in the right upper quadrant of the abdomen. What is the most appropriate next step in management:**

- a. Order a CT scan of the abdomen.
- b. Order a barium swallow.
- c. Obtain a surgical consultation.
- d. Follow up examination after 4 hours.

Answer: c.

**4. A 2-week-old infant develops fever (38.9°C), vomiting, and irritability. His heart rate is 170/m and respiratory rate is 40/m. The infant's anterior fontanel is full, but there is no nuchal rigidity. The rest of examination is unremarkable. What is the appropriate management:**

- a. Oral fluid and follow up in 24 hrs.
- b. Oral amoxicillin and follow up in 1 week.
- c. Admission to hospital for investigation and treatment.
- d. Intramuscular ceftriaxone and follow up in 1 week.

Answer: c.

**5. A 2-month-old boy with a 3-day history of mild fever and runny nose suddenly develops high fever, cough and respiratory distress. Within 48 hours, the patient deteriorated and has developed a pneumatocele and a left sided pneumothorax. What is the appropriate 1<sup>st</sup> action:**

- a. IV antibiotics.
- b. Blood gases.
- c. Chest tube.
- d. Antipyretics.

Answer: c.

**6. A 2-week-old infant has had no immunizations, sleeps 18 h a day, weighs 3.5 kg, and takes 60 ml of standard infant formula four times a day, but no solid food and no iron or vitamin supplements. What should be of most concern about this infant:**

- a. Immunization status.
- b. Caloric intake.
- c. Iron levels.
- d. Circadian rhythm.

Answer: b.

**7. A 7-year-old boy who was limping for 3 days presented to the surgical department with severe acute colicky abdominal pain. The surgery resident asked for medical consultation for a raised rash on the back of both lower limbs of the child. What is the likely cause of the acute abdomen:**

- a. Rheumatic fever.
- b. Appendicitis.
- c. Henoch-Schonlein purpura.
- d. Rheumatoid arthritis.

Answer: c.

**8. A 10-month-old female infant is brought to clinic for routine health evaluation. Her diet consists of ordinary food and a lot of fresh whole milk. On examination, she is pale, hemoglobin is 7.5 gm%; otherwise there are no abnormalities. What is the most likely diagnosis:**

- a. Thalassemia.
- b. Iron deficiency anemia.
- c. Sickle cell anemia.
- d. Anemia of chronic illness.

Answer: b.

---

## TEST 2:

---

1. **An infant can move his head from side to side while following a moving object, can lift his head from a prone position 45 degrees off the examining table, and smiles when encouraged. He can sit with support. What is the most likely age of this infant:**
- 1 month.
  - 5 months.
  - 9 months.
  - 12 months.

Answer: b.

2. **A 3-week-old baby, who was full term, is brought to the hospital. He has recently been having problems completing his feeds and today appears short of breath. On examination, his heart rate was 180/min, respiratory rate 72/min, rectal temperature 37.4, blood pressure 80/50, and he had a 4-cm hepatomegaly. All blood tests were normal. What is the most likely diagnosis:**

- Neonatal hepatitis.
- Respiratory distress syndrome.
- Heart failure.
- Congenital infection.

Answer: c.

3. **A 3-day-old infant presents with the complaint of a yellowish skin. Both the mother and the baby have O positive blood. The baby's direct serum bilirubin is 0.2 mg/dl, with a total serum bilirubin of 11.8 mg/dl. The hemoglobin is 17 g/dl and the platelet count is 278,000/ml. Reticulocyte count is 1.5%. The peripheral smear does not show abnormalities. What is the most likely diagnosis:**

- Rh and ABO incompatibility.
- Physiologic jaundice.
- Sepsis.
- Congenital spherocytic anemia.
- Biliary atresia.

Answer: b.

4. **A 15-month-old infant presents to the emergency department with a 4-day history of high fever without any localizing signs. She suffers a short self-limiting convulsions and is admitted for observation. The next day the fever subsides, but a red maculo-papular rash develops over her trunk and abdomen. What is the most likely diagnosis:**

- Measles.
- Rubella.
- Roseola infantum.
- Chicken pox.

Answer: c.

**5. An 18-month-old boy came to the emergency department with rapid respiration and drowsiness. He had a history of vomiting and diarrhea for 3 days before the onset of his condition. By examination, HR was 160/m, RR was 60/m, temperature was 38.5°C and BP was 60/40. He had delayed capillary refill. What is the most likely action to be done:**

- a. Chest x-ray.
- b. Giving oral treatment and follow up.
- c. Administration of IV fluids.
- d. Blood gas analysis.

Answer: c.

**6. A 4-week-old, full term, and breast fed girl has worsening yellowish discoloration of the skin, that the parents first noticed 15 days ago. On her examination, she is well appearing with good suckling and reflex activity, and is noted to have a liver edge 4 cm below her costal margin. Her total bilirubin is 12 mg/dl and direct bilirubin is 9 mg/dl. What is the most likely diagnosis:**

- a. Biliary atresia.
- b. Cephalhematoma.
- c. Sepsis.
- d. Breast milk jaundice.

Answer: a.

**7. A 7-week-old baby is referred with a 2-week history of vomiting. He is being formula-fed (160 ml) every 2-3 hrs. On examination, he is well, thriving, on the 90<sup>th</sup> percentile of weight and has a normal examination. What is the most likely diagnosis:**

- a. Pyloric stenosis.
- b. Gastro-esophageal reflux.
- c. Over-feeding.
- d. Gastro-enteritis.

Answer: c.

**8. A 5-month-old girl presented with history of constipation and delayed developmental milestones. She had prolonged physiological jaundice. On exam, she is hypoactive, has an open mouth with large tongue. Other systemic examinations are within normal. What is the next step in management:**

- a. Checking T<sub>4</sub> and TSH.
- b. Checking serum bilirubin.
- c. Doing CT scan of head.
- d. Follow up after 4 weeks.

Answer: a.

---

## TEST 3:

---

**1. A 7-year-old boy arrives at the emergency department, complaining of rapid breathing and vomiting, dating 3 days ago. He has been receiving IM antibiotics for 3 days with no improvement. On examination, he has rapid deep breathing with RR 60/min, HR 90/min. Chest x-ray was normal. What is the next investigation to do:**

- a. CT chest.
- b. Upper GIT endoscopy.
- c. Echocardiography.
- d. Blood gases.

Answer: d.

**2. A 9-year-old child comes to the hospital with an acute onset of generalized convulsions and disturbed conscious level. The parents did not report any similar neurological trouble beforehand. On examination, HR was 70/min, RR 20/min. What is the 1<sup>st</sup> action to after control of convulsions:**

- a. Blood gases.
- b. Blood pressure measurement.
- c. CT brain.
- d. Fundus examination.

Answer: c.

**3. An 8-year-old boy comes complaining of bedwetting for the past 2 weeks. He has previously been continent. On examination, his height is below 5<sup>th</sup> percentile. His hemoglobin is 6.5 gm%. What is the most important next step:**

- a. Check blood sugar.
- b. Give oral iron.
- c. Try fluid restriction and rewarding for dry nights.
- d. Check blood urea and creatinine.

Answer: d.

**4. A 1-year-old infant is complaining of delayed sitting and repeated chest infections. On examination, there are prominent costochondral junctions. He is exclusively breastfed, and he received multiple injections for treatment of his condition. All the following are expected complications for his condition, except:**

- a. Anorexia.
- b. Vomiting.
- c. Oliguria.
- d. Nephrocalcinosis.

Answer: c.



**5. The mother of 4 months old boy complains that her child still can not support his head. On examination, the child has a flat occiput, and a transverse palmar crease. Local examination of the heart shows a hollow systolic murmur over the left parasternal area. Which of the following is a common complication of his condition:**

- a. Immune thrombocytopenic purpura.
- b. G6PD deficiency.
- c. Leukemia.
- d. Pyloric stenosis.

Answer: c.

**6. A 9-year-old child suffers from an acute-onset weakness which initially started in the lower limbs then involved in the upper limbs. The condition was preceded 3 weeks earlier by a respiratory tract infection. On examination, there is hypotonia and hyporeflexia of both lower limbs. There is no history of convulsions. What is the most likely diagnosis:**

- a. Brain tumor.
- b. Poliomyelitis.
- c. Guillain-Barre syndrome.
- d. Werdnig Hoffman syndrome.

Answer: c.

**7. An infant weighing 1400 g is born at 32 weeks. Vital signs include heart rate 140/m, respiratory rate 80/m, temperature 35°C. The lungs are clear with bilateral breath sounds and there is no murmur. What is the most appropriate 1<sup>st</sup> step in management:**

- a. Obtain CBC with differential.
- b. Perform lumbar puncture.
- c. Chest x-ray.
- d. Place infant under warmer.
- e. Administer oxygen.

Answer: d.

**8. A previously well 1-year-old infant has had a runny nose and has been sneezing and coughing for 2 days. Two other members of the family had similar symptoms. Four hours ago, his cough became much worse. On physical examination, he is in moderate respiratory distress with nasal flaring, hyper-expansion of the chest and easily audible wheezing without rales. Which of the following is the most likely diagnosis:**

- a. Bronchiolitis.
- b. Viral croup.
- c. Asthma.
- d. Epiglottitis.

Answer: a.

# Final exam – May 2018

**1. Which of the following is correct?**

- a. Each chromosome is formed of one or two genes.
- b. A person should be homozygous for gene to get autosomal dominant disorder
- c. Each person have 2 pairs of sex chromosomes
- d. Recurrence risk autosomal dominant disorder is 50%

Answer: d

**2. Which of the following is correct about respiratory distress:**

- a. The fourth grade is characterized by presence of bradycardia, apnea & cyanosis
- b. In the first grade there is only tachypnea
- c. Intercostal & subcostal retraction are only seen in 2<sup>nd</sup> grade
- d. Grunting is prominent feature in 3<sup>rd</sup> grade

Answer: d

**3. In chromosomal abnormalities:**

- a. Ring chromosome is special type of deletion
- b. Duplication is doubling of genetic material of a whole chromosome
- c. Inversion means that the long arm is above & short is below
- d. Isochromosome is due to division of centrosome longitudinally instead of transversely

Answer: a

**4. Microcytic anemia is caused by:**

- a. Leukemia
- b. Thalassemia major
- c. Spherocytosis
- d. Autoimmune hemolytic anemia

Answer: b

**5. Concerning hemolytic anemia:**

- a. There is increased serum iron binding capacity
- b. Usually direct serum bilirubin markedly increased
- c. Increased fecal urobilinogen is common
- d. Reticulocytes is 1-2% usually

Answer: c

**6. In thalassemia major:**

- a. Red cells shows macrocytosis
- b. There is many target cells in peripheral blood
- c. There is low serum ferritin
- d. Bone marrow shows asplasia

Answer: b

**7. Non immune thrombocytopenic purpura is seen in all of the following EXCEPT:**

- a. Idiopathic thrombocytopenic purpura
- b. Hemolytic uremic syndrome
- c. Disseminated intravascular coagulopathy

- d. Hypersplenism

Answer: a

**8. Concerning blood gases:**

- a. Both arterial & venous sampling give the same result except for CO<sub>2</sub> level
- b. PaO<sub>2</sub> below 70 indicate hypoxemic respiratory failure
- c. PaCO<sub>2</sub> between 45-50 indicate hyperventilation
- d. pH 7.2 & low bicarbonate indicate metabolic acidosis

Answer: d

**9. In nephrotic syndrome:**

- a. Idiopathic type may be due to disturbance in T cell function
- b. Hepatic albumin synthesis is decreased
- c. Edema occurs as a result of hypoglobulinemia
- d. Hypcholesterolemia is common

Answer: a

**10. In case of glomerulonephritis:**

- a. Occurs after streptococcal infection by 2 or 3 days
- b. Polyuria
- c. Scrotal edema is a common finding
- d. Seizures may occur

Answer: d

**11. Nocturnal enuresis:**

- a. Is defined as bed wetting after age of 3 years
- b. It is due to developmental delay in acquiring sphincter control
- c. Most children have organic causes
- d. Primary nocturnal enuresis has high rate of recurrence

Answer: b

**12. Which of the following is correct about Moro reflex?**

- a. It starts with shoulder adduction of the arms
- b. It can be elicited by dropping of the head
- c. It is associated with fisted hands
- d. It becomes stronger during the 3<sup>rd</sup> month of life

Answer: b

**13. A skin rash is NOT an essential part of diagnosis in:**

- a. Infectious mononucleosis
- b. Varicella zoster infection
- c. Rubella
- d. Measles

Answer: a

**14. All of the following may be normal in cerebral palsy EXCEPT**

- a. Cognitive abilities
- b. Sensor functions
- c. Motor functions
- d. Auditory functions

Answer: c

**15. Scarlet fever:**

- a. It caused by group B hemolytic streptococcus
- b. It is most common between 6 months – 2 years
- c. Its incubation period is 2-4 days
- d. The rash appears on the 4<sup>th</sup> day of fever

Answer: c

**16. Which of the following is correct about kernicterus?**

- a. Bilirubin is deposited mainly in cerebral hemispheres
- b. Can be prevented by proper management
- c. It is caused increased level of direct bilirubin
- d. Increased albumin binding capacity increase its risk of occurrence

Answer: b

**17. All of the following drugs are needed for neonatal resuscitation EXCEPT**

- a. Epinephrine solution
- b. Naloxone hydrochloride
- c. Diuretics
- d. Sodium bicarbonate

Answer: c

**18. Which of the following is correct about neonatal seizures**

- a. Clonic one is rigid posture of extremity
- b. Myoclonic one is blinking of the eye
- c. Tonic one is a focal jerks of distal muscle group of the body
- d. Subtle one may appear as chewing motion

Answer: d

**19. Which of the following is seen during abdominal examination of the newborn:**

- a. Divarication of the recti
- b. Liver is not felt under costal margin
- c. Testicles is not felt in scrotum
- d. Umbilical cord should slough before the sixth day

Answer: a

**20. Which of the following is correct about Babinski reflex in newborn**

- a. The response is downwards movements of big toe
- b. Usually disappears by the age of one year
- c. Its persistence beyond the one & half year is abnormal
- d. Its persistence beyond the recommended age indicate lower motor neuron lesion

Answer: b

**21. In neonatal respiratory distress syndrome**

- a. Surfactant increase the alveolar surface tension of water
- b. Symptoms usually start to appear after 24 years
- c. X-ray shows peripheral air bronchograms
- d. Nasal CPAP is contraindicated

Answer: c

**22. In cranial birth injuries**

- a. Caput succedaneum start few days after birth
- b. Cephalhematoma may be associated with jaundice
- c. Subgaleal hematoma due to bleeding under the periosteum
- d. Intracranial hemorrhage definite diagnosis in only with CT or MRI

Answer: b

**23. In neuromuscular disorders**

- a. Myasthenia gravis is due to anterior horn cell lesion
- b. Werdnig Hoffmann genetic disease of neuromuscular junction
- c. Dermatomyositis is caused by virus infection
- d. Guillain Barre post-infectious acute paralysis

Answer: d

**24. In hydrocephalus**

- a. Arnold-Chiari malformation is obstructive form
- b. If occur in children hypotonia & hyporeflexia of both lowers is common
- c. Anterior fontanel is large & sunken
- d. Sun set appearance the eyes may be seen

Answer: d

**25. In neonatal endotracheal limb intubation**

- a. Indicated if chest compression is necessary
- b. In infant less than 1000 gram use size 3.5 mm
- c. During intubation the neck should be bended slightly forwards
- d. Slide the laryngoscope blade over the left side of the tongue

Answer: a

**26. All of the following are common complications of pertussis EXCEPT**

- a. Pneumonia
- b. Intracranial hemorrhage
- c. Peripheral neuritis
- d. Rectal prolapse

Answer: c

**27. Which of the following is correct about juvenile diabetes mellitus**

- a. Single dose of insulin before breakfast is used for treatment
- b. A hypoglycemia is a common acute complication
- c. Carbohydrates should be around 25% of total caloric intake
- d. Snacks in between meals is usually not advisable

Answer: b

**28. About short stature**

- a. Familial short stature is associated with delayed growth
- b. Growth deceleration is the early sign in constitutional delay growth
- c. In genetic short stature CT assessment of pituitary gland should be done
- d. In familial short stature parents are usually short

Answer: d

**29. Colostrum**

- a. It is a thick white fluid
- b. Has acidic PH
- c. It has high fat content
- d. It is about 40-60 ml/day

Answer: d

**30. Which of the following is NOT constant finding in Kawshiorkor**

- a. Generalized edema
- b. Delayed growth
- c. Decreased muscle & fat ratio
- d. Mentality changes

Answer: b

**31. Radiological finding in rickets**

- a. Green stick fracture is seen severe form of active rickets
- b. Fraying is typical in healing rickets
- c. Concave dense white line in metaphysics is typical of healed rickets
- d. Rarefaction is commonly seen in healed rickets

Answer: a

**32. Meningococcal vaccine**

- a. Live attenuated vaccine
- b. Needs booster dose every 2-3 years
- c. It is given in 3 successive doses
- d. It is given 0.5 ml intradermal

Answer: b

**33. Sabin vaccine**

- a. It is a killed viral vaccine
- b. It has no systemic or local reaction but it cost is expensive
- c. It give long lasting immunity
- d. Its immunity starts 6 weeks after vaccination

Answer: c

**34. During cardiac evaluation**

- a. Cyanotic spells occur in low pulmonary blood flow
- b. Squatting occur in any case of congenial cyanotic heart
- c. Pulmonary venous congestion in in infancy usually presented by orthopnea
- d. Pulmonary stenosis commonly presented by chest pain

Answer: a

**35. In VSD**

- a. The bigger the size the louder the murmur
- b. The murmur is maximum over the apex
- c. A loud pulmonary 2<sup>nd</sup> sound is essential for diagnosis
- d. Heart failure is a common presentation

Answer: d

**36. About PDA**

- a. Its more common in premature
- b. Always associated with cardiomegaly
- c. Machinery systolic murmur maximum at left infraclavicular area
- d. Wide pulse pressure in upper limb not lower limb

Answer: a

**37. In rheumatic mitral stenosis**

- a. It is common in children
- b. Shortened mitral valve leaflet is the pathological finding
- c. A loud 2<sup>nd</sup> sound & low 1<sup>st</sup> sound if present
- d. Dyspnea with or without exertion is common

Answer: d

**38. Which of the following is a sign of poor attachment of the infant to his mother's breast?**

- a. Infant's chin touching breast
- b. His mouth wide open
- c. His lower lip turned inward
- d. More areola visible above than below his mouth

Answer: c

**39. In bronchiolitis:**

- a. Peak incidence is 3 years
- b. Most of the cases are caused by Adenovirus
- c. Bronchodilator is the first line of therapy
- d. Oxygen therapy is essential severe cases

Answer: d

**40. The post-hepatic portal hypertension may be due to:**

- a. Portal vein thrombosis
- b. Viral B hepatitis
- c. Bilharziasis
- d. Veno-occlusive disease

Answer: d

**41. Which of the following is the most common presentation in Klinefelter's syndrome?**

- a. Infertility
- b. Big size testes
- c. Short stature
- d. Absent erection

Answer: a

**42. Causes of cholestasis include all of the following EXCEPT**

- a. Rubella
- b. Cytomegalovirus infection
- c. Phenylketonuria
- d. Alagille syndrome

Answer: c

**43. Which of the following is WRONG about tetanus?**

- a. It is caused by clostridium tetani
- b. The endotoxin of the organism is responsible for the clinical manifestation
- c. Contaminated wounds are the main cause
- d. Prevention by vaccination is possible

Answer: b

**44. Which of the following is correct about Iry teeth?**

- a. They are 20 in numbers
- b. The average age of appearance of lower central incisors is 10-12 months
- c. The average age of appearance of canines 22-25 is months
- d. The average of appearance of 1<sup>st</sup> molars in 18-20 months

Answer: a

**45. Which of the following is correct?**

- a. The infant double his birth body weight at the age of 4 months
- b. The infant triple his body birth weight at the age of 10 months
- c. The child double his birth length at the age of 6 years
- d. The child triple his birth length at the age of 10 years

Answer: a

**46. Streptococcal pharyngitis**

- a. Peak incidence is 18 months
- b. Unilateral follicular exudates is typical finding
- c. Tender posterior cervical lymphadenitis is the most common finding
- d. Peritonsillar abscess is a possible complication

Answer: d

**47. In pneumonia due to infection**

- a. The commonest Gram positive organism is hemophilus influenza
- b. The commonest Gram negative organism is pneumococci
- c. Entrovirus is the commonest virus causing pneumonia
- d. Giant cell pneumonia is viral in origin

Answer: d

**48. In lung abscess which of the following is WRONG:**

- a. It is a suppurative process of lung parenchyma
- b. It is not uncommon to occur as a complication of anaerobic infection
- c. Aspiration of infected material is a very common cause
- d. Metastatic lung abscess is uncommon in children

Answer: b

**49. In Down syndrome one of the following is NOT correct**

- a. Flat occiput
- b. Upward slanting of palpebral fissure
- c. Epicanthal fold
- d. Simian crease is pathognomonic

Answer: d



**50. Iry microcephaly may be seen in**

- a. Rickets
- b. Achondroplasia
- c. Edward syndrome
- d. Klinefelter syndrome

Answer: c

**51. In isotonic dehydration**

- a. It represents 75% of cases of dehydration
- b. The tongue is moist
- c. The turgor is normal
- d. Coma is a typical CNS finding

Answer: a

**52. To manage hyperkalemia**

- a. 0.5 of calcium gluconate 5%
- b. Peritoneal dialysis
- c. 4ml of NaHCO<sub>3</sub> 10%
- d. Glucose 4 ml/kg + insulin (1 unite insulin for 20ml glucose 10%)

Answer: b

**53. Soya based formula**

- a. Fructose replace the lactose
- b. Has high aluminum content
- c. It not nutritionally adequate for normal children
- d. It could not be used with breast milk

Answer: b

**54. Herpetic gingivostomatitis**

- a. Is associated with high fever
- b. Usually presented with white places covering the gingival
- c. Most common in neonates
- d. Mycostatin is the drug of choice

Answer: a

**55. Pyloric stenosis**

- a. Associated with hyperchloraemic acidosis in severe cases
- b. It is more common in girls
- c. It is usually discovered with first feed
- d. It is treatment by surgical pyloromyotomy

Answer: d

**56. In gastro-esophageal reflux one of the following is WRONG**

- a. It may be asymptomatic
- b. Symptoms usually start after 1<sup>st</sup> year
- c. Dystonic movements of head & neck may be associated
- d. Most cases resolve spontaneously

Answer: b

**57. Persistent diarrhea**

- a. In sugar intolerance the stool is bloody
- b. In cows milk allergy the stool is acidic
- c. In bacterial overgrowth E.coli invade upper part of small intestine
- d. Vitamin D is the most important vitamin to be replaced

Answer: c

**58. Viral hepatitis**

- a. The virus causes hepatitis B virus is RNA in nature
- b. The virus causes hepatitis C virus in DNA in nature
- c. Incubation period of hepatitis C virus is 2-6 weeks
- d. Hepatitis delta virus can be prevented by vaccination

Answer: d

**59. What is WRONG about hereditary spherocytosis**

- a. It is caused by autosomal recessive trait
- b. It may cause neonatal jaundice
- c. Osmotic fragility test is positive
- d. Splenectomy improve the condition

Answer: a

**60. Regarding hemodynamic parameters in the different types of shock all of the following is true except**

- a. Cardiac output is decreased in hypovolemic shock
- b. Central venous pressure (CVP) is decreased in hypovolemic shock
- c. Cardiac output is decreased in cardiogenic shock
- d. Central venous pressure (CVP) is decreased in cardiogenic shock

Answer: d

**61. A 5 year old boy presented to the ER with abdominal pains and recurrent vomiting in the last few days. On examination, temperature 36.8, moderately dehydrated with impaired level of consciousness. His breathing was deep and rapid**

**A. The most urgent lab test you need to request is**

- a. CT scan of the brain
- b. Blood ammonia
- c. Blood sugar
- d. CSF examination and culture

Answer: c

**B. The child is expected to have**

- a. Respiratory acidosis
- b. Respiratory alkalosis
- c. Metabolic acidosis
- d. Metabolic alkalosis

Answer: c

**62. A 13 month old girl presented to her pediatrician with fever 40 degrees of 2 days duration. On examination there were no sign to explain this fever. The doctor prescribed antipyretics only. On the fourth day of illness, the fever disappeared suddenly, and a maculopapular rash appeared in the same day. The rash started over the trunk then spread to the neck, arms and face. The rash faded within 24 hours**

**A. The most likely diagnosis is:**

- a. Measles
- b. Rubella
- c. Roseola infantum
- d. Scarlet fever

Answer: c

**B. The most likely complication in this patient is:**

- a. Acute rheumatic fever
- b. Encephalitis
- c. Secondary bacterial infections
- d. Febrile convulsions

Answer: d

**63. A 6 year old asthmatic child presented to the ER with severe Grade 3 respiratory distress, bilateral diminished air entry and generalized wheezing. The oxygen saturation at room air is 88%**

**A. The most appropriate first step:**

- a. Ask for a plain chest X-ray
- b. Oxygen and nebulized salbutamol
- c. Inhaled corticosteroids
- d. IV steroids

Answer: b

**B. Which of the following is unlikely in this child:**

- a. Positive family history of atopy
- b. Eosinophilia in CBC
- c. High total serum IgE
- d. Jet black radiolucency in chest X-ray

Answer: d

**64. A 5 week old male presented with projectile vomiting after feeding and poor weight gain. On examination, visible peristalsis is seen as a wave moving from left to right across the abdomen**

**A. The most likely diagnosis is:**

- a. Pyloric stenosis
- b. Gastro-esophageal reflux
- c. Acute gastritis
- d. Esophageal atresia

Answer: a

**B. The recommended initial treatment is**

- a. Drugs enhancing gastric emptying
- b. Correction of fluid and electrolyte disturbances

- c. Antiemetic drugs
- d. Thickening agents to the feeds

Answer: b

**65. A female baby was delivered by and elective cesarean section at 35 weeks of gestation due to severe maternal hypertension. The mother is a 38 years primipara with infrequent antenatal care. The baby's birth weight is 1650gms (below 10<sup>th</sup> percentile), length 44cms (at 25<sup>th</sup> percentile) and head circumference 31cms (at 25<sup>th</sup> percentile) on the growth curves**

**A. The proper description of that baby is:**

- a. A full term, AGA (appropriate for gestational age) female newborn
- b. A preterm, SGA (small for gestational age) female newborn
- c. A preterm, AGA (appropriate for gestational age) female newborn
- d. A full term, SGA (small for gestational age) female newborn

Answer: b

**B. All of the following problems are to be anticipated (expected) in that baby except:**

- a. Hypoglycemia
- b. Respiratory distress syndrome
- c. Polycythemia
- d. Cephalhematoma

Answer: d

**66. An 18 month old male was brought to the emergency room one month age with history of repeated convulsions. On examination, the patient had enlarged costochondral junctions and broad ends of bones at wrists and ankles. At that time, the doctor prescribed for him an oral drug & a single IM injection. By mistake, the baby received 15 IM injections within a month. Now he is presenting with anorexia, nausea, vomiting, polyuria and polydipsia**

**A. The most likely cause of the initial convulsions is**

- a. Hyperglycemia
- b. Hypercalcemia
- c. Hypoglycemia
- d. Hypocalcemia

Answer: d

**B. What is the cause of his current condition**

- a. Rickets
- b. Hypervitaminosis D
- c. Diabetic ketoacidosis
- d. Diabetes insipidus

Answer: b

**67. A 9 month old boy was brought to the neurology clinic by his mother who felt he is not as good as his sibs. In supine position, the baby's limbs were abducted and flexed. When the baby was pulled from his hands, the head lagged backwards**

**A. All of the following can cause this condition except**

- a. Spastic diplegia
- b. Atonic cerebral palsy
- c. Werdnig-Hoffmann disease

- d. Congenital myopathy

Answer: a

**B. Which of the following is not expected in this patient**

- a. Weak cough and cry
- b. Tongue fasciculation
- c. Exaggerated tendon jerks
- d. Late respiratory paralysis

Answer: c

**68. A 2 week old boy brought to the pediatric cardiologist for being bluish from day 1 of his birth. On examination, the baby shows central cyanosis that could not be corrected even with 100% oxygen. A pan systolic murmur is heard all over the pericardium mainly on the left parasternal area. The heart rate is 180/min. The liver is enlarged and tender. Chest X-ray showed and egg-shaped heart with narrow pedicle.**

**A. The most likely diagnosis is:**

- a. Fallot's Tetralogy
- b. Single ventricle
- c. Truncus arteriosus
- d. Transposition of great arteries (TGA)

Answer: d

**B. Which of the following is not expected in this baby**

- a. Right axis deviation in ECG
- b. Hyper cyanotic spells
- c. Right to left shunting of blood
- d. Heart failure

Answer: b

**69. A 5 year old girl presented with recurrent throat infections. On examinations, the child was significantly pale, has numerous petechiae on her skin. CBC showed a total white cell count of  $1050/\text{mm}^3$ , hemoglobin of 7gm/dl and platelet count of  $25,000/\text{mm}^3$ . The spleen was not enlarged.**

**A. The most likely diagnosis is:**

- a. Aplastic anemia
- b. Acute leukemia
- c. Immune thrombocytopenic purpura
- d. Systemic lupus erythematosus

Answer: a

**B. The anemia is expected to be:**

- a. Normocytic normochromic anemia
- b. Microcytic hypochromic anemia
- c. Macrocytic hyperchromic anemia
- d. Macrocytic hypochromic anemia

Answer: a

**70. A 10 year old boy presented with fever of 38.2, burning urination and suprapubic pain. The condition started since 2 days. Since then the child vomited 3 times, bowel habits were normal. Urine was turbid but its color was normal**

**A. What is the most likely diagnosis**

- a. Acute cystitis
- b. Acute glomerulonephritis
- c. Acute pyelonephritis
- d. Acute pancreatitis

Answer: a

**B. Which of the following is expected in this child**

- a. Red cell and hyaline casts in urine
- b. Gross hematuria
- c. Massive proteinuria
- d. Urgency (urgent need to urinate accompanied by a sudden loss of urine)

Answer: d

**71. A 3 year old boy presented to the ER with history of severe persistent vomiting and diarrhea over the last 36 hours. On examination the child was severely dehydrated, pale, with cold extremities. The skin was mottled, heart rate 160/min and blood pressure 50/30**

**A. The child is expected to have:**

- a. Metabolic acidosis
- b. Metabolic alkalosis
- c. Respiratory acidosis
- d. Respiratory alkalosis

Answer: a

**B. The capillary refill time of this child is expected to be:**

- a. 1 second
- b. 2 second s
- c. 3 seconds
- d. More than 5 seconds

Answer: d

**72. At his 5<sup>th</sup> day of life the results of neonatal screening for thyroid came with low T3, low T4 and high TSH**

**A. This baby is likely to have:**

- a. Diarrhea
- b. Constipation
- c. Tachycardia
- d. Excessive crying

Answer: b

**B. This baby will continue the treatment for:**

- a. First year
- b. First 5 years
- c. Till puberty
- d. For life

Answer: d

**73. During a routine visit to the pediatrician a 2 year old boy was found to have an ejection systolic murmur at upper left sternal border. Detailed evaluation revealed systemic hypertension in right arm as well as weak femoral pulse.**

**A. The ECG is expected to show:**

- a. Left ventricular hypertrophy
- b. Right ventricular hypertrophy
- c. Left atrial hypertrophy
- d. Right atrial hypertrophy

Answer: a

**B. The most likely diagnosis is:**

- a. PDA
- b. Congenital Mitral stenosis
- c. Congenital Aortic stenosis
- d. Coarctation of the Aorta

Answer: d

**74. A 15 year old boy presented with bilateral enlargement of the breasts (gynecomastia). The parents were worried about the future of their son as they noticed an apparently small testicles. The height of the patient was on the 99<sup>th</sup> percentile for age and sex.**

**A. The most likely diagnosis is:**

- a. Turner syndrome
- b. Klinefelter syndrome
- c. Ambiguous genitalia (Intersex)
- d. Premature adrenarche

Answer: b

**B. The genetic defect of this condition is:**

- a. X-linked dominant inheritance
- b. X-linked recessive inheritance
- c. Sex chromosome abnormality
- d. Polygenic inheritance

Answer: c

**75. A 4 year old boy was referred to a pediatric rheumatologist with a provisional diagnosis of Juvenile rheumatoid arthritis. He was asked to do CBC, which showed significant anemia, and Hemoglobin electrophoresis, which was diagnostic.**

**A. What is the diagnosis**

- a. Beta-thalassemia major
- b. Sickle cell anemia
- c. Hemoglobin C disease
- d. Acute lymphoblastic leukemia

Answer: b

**B. The pains in hands and feet in this disease are due to:**

- a. Vascular occlusion
- b. Severe anemia
- c. Concomitant Vitamin D deficiency

- d. Sequestration crisis

Answer: a

**76. A 3 year old boy presented to the ER with gum bleeding that did not stop over 2 hours of local compression. On examination, multiple bruises and hematomas were seen over the abdomen and along the chin of tibia. The mother recalls extensive bleeding after circumcision, the family attributed that bleeding to faulty procedure and doctor's incompetence. Laboratory results showed significantly prolonged PTT. The specific coagulation factor VIII assay was 3% of the normal level.**

**A. This disease is:**

- a. An autosomal dominant disease
- b. An autosomal recessive disease
- c. An X-linked dominant disease
- d. An X-linked recessive disease

Answer: d

**B. The degree of disease severity in this child is:**

- a. Mild
- b. Moderate
- c. Severe
- d. Profoundly severe

Answer: b

**77. A 5 year old boy presented to the ER with disturbed level of consciousness, persistent vomiting with blood stained vomitus and progressive jaundice of 2 days duration. On examination the liver was enlarged and tender, and a lot of bruises are seen scattered over his skin. Lab results showed elevated serum transferases (AST and ALT), elevated blood ammonia, low serum albumin, low blood sugar and prolonged prothrombin time (PT).**

**A. Which of the following describes the current baby's situation**

- a. Acute viral hepatitis
- b. Acute hepatic failure
- c. Coma for differential diagnosis
- d. Acute hemolytic crisis

Answer: b

**B. Reduction of blood ammonia can be achieved by all of the following except:**

- a. Neomycin (oral)
- b. Lactulose (oral or enema)
- c. Reduction of protein intake
- d. IV vitamin K

Answer: d



**78. A 2 year old boy is seen in casualty with the complaint of significant abdominal distension. According to the mother the condition started 20 hours ago with what she describes as severe paroxysms of colic accompanied by loud crying. This was associated with repetitive vomiting. The vomitus is bile stained and the stool contains blood and mucous.**

**A. The most likely diagnosis is:**

- a. Strangulated inguinal hernia
- b. Midgut volvulus
- c. Gastroenteritis
- d. Intussusception

Answer: d

**B. One of the following cannot be present:**

- a. Fluid levels on erect abdominal X-rays
- b. Sausage-shaped mass in right upper quadrant
- c. Double bubble appearance on abdominal X-rays
- d. Red currant jelly stools

Answer: c

**79. Immediately after vaginal delivery, the pediatrician in charge of resuscitation of the newborn noticed grade 3 respiratory distress with severe intercostal and suprasternal retractions. The color of the baby started to become bluish and his oxygen saturation started to decline to below 86%. The saturation and color improved once the mouth was opened and an oral airway inserted.**

**A. The most likely diagnosis is:**

- a. Congenital diaphragmatic hernia
- b. Hyaline membrane disease
- c. Amniotic fluid aspiration
- d. Bilateral choanal atresia

Answer: d

**B. Which of the following statements is correct?**

- a. No surgery is needed
- b. Immediate surgery is required
- c. Surgery is needed once the baby reaches 3 months of age
- d. Surgery is needed once the baby doubles his birth weight

Answer: b

**80. A 3 year old presented to the ER with impaired level of consciousness and shallow irregular breathing. The PaCO<sub>2</sub> was 62 mmHg and the PaO<sub>2</sub> was 98 mmHg at room air. There was a history of blunt trauma to the head since 3 hours.**

**A. The blood gases shows that the child has:**

- a. Type 1 respiratory failure
- b. Type 2 respiratory failure
- c. Metabolic alkalosis
- d. Metabolic acidosis

Answer: b

**B. The most likely cause is:**

- a. Intracranial hemorrhage
- b. Drug intoxication
- c. Respiratory muscle fatigue
- d. Profoundly severe hemorrhage

Answer: a